Color imageRUNNER C1030/C1022 Series

SERVICE MANUAL

Canon

October 29, 2010
Rev. 0

COPYRIGHT © 2010 CANON INC.

Application

This manual has been issued by Canon Inc. for qualified persons to learn technical theory, installation, maintenance, and repair of products. This manual covers all localities where the products are sold. For this reason, there may be information in this manual that does not apply to your locality.

Corrections

This manual may contain technical inaccuracies or typographical errors due to improvements or changes in products. When changes occur in applicable products or in the contents of this manual, Canon will release technical information as the need arises. In the event of major changes in the contents of this manual over a long or short period, Canon will issue a new edition of this manual.

The following paragraph does not apply to any countries where such provisions are inconsistent with local law.

Trademarks

The product names and company names used in this manual are the registered trademarks of the individual companies.

Copyright

This manual is copyrighted with all rights reserved. Under the copyright laws, this manual may not be copied, reproduced or translated into another language, in whole or in part, without the written consent of Canon Inc.

COPYRIGHT © 2001 CANON INC.

Printed in Japan

Caution

Use of this manual should be strictly supervised to avoid disclosure of confidential information.

Symbols Used

This documentation uses the following symbols to indicate special information:

Symbol	Description
	Indicates an item of a non-specific nature, possibly classified as Note, Caution, or Warning.
	Indicates an item requiring care to avoid electric shocks.
	Indicates an item requiring care to avoid combustion (fire).
	Indicates an item prohibiting disassembly to avoid electric shocks or problems.
	Indicates an item requiring disconnection of the power plug from the electric outlet.
Memo	Indicates an item intended to provide notes assisting the understanding of the topic in question.
REF.	Indicates an item of reference assisting the understanding of the topic in question.
	Provides a description of a service mode.
	Provides a description of the nature of an error indication.

The following rules apply throughout this Service Manual:

1. Each chapter contains sections explaining the purpose of specific functions and the relationship between electrical and mechanical systems with reference to the timing of operation.
   In the diagrams, ▭▮▮▮▭ represents the path of mechanical drive; where a signal name accompanies the symbol , the arrow ⟶ indicates the direction of the electric signal.
   The expression "turn on the power" means flipping on the power switch, closing the front door, and closing the delivery unit door, which results in supplying the machine with power.
2. In the digital circuits, '1'is used to indicate that the voltage level of a given signal is "High", while '0' is used to indicate "Low".(The voltage value, however, differs from circuit to circuit.) In addition, the asterisk (*) as in "DRMD*" indicates that the DRMD signal goes on when '0'.
   In practically all cases, the internal mechanisms of a microprocessor cannot be checked in the field. Therefore, the operations of the microprocessors used in the machines are not discussed: they are explained in terms of from sensors to the input of the DC controller PCB and from the output of the DC controller PCB to the loads.

The descriptions in this Service Manual are subject to change without notice for product improvement or other purposes, and major changes will be communicated in the form of Service Information bulletins.
All service persons are expected to have a good understanding of the contents of this Service Manual and all relevant Service Information bulletins and be able to identify and isolate faults in the machine."

Contents

Chapter 1 Introduction
1.1 System Construction 1- 1
1.1.1 System Configuration of Pickup/Delivery Options 1- 1
1.1.2 System Configuration of Print/Send Options 1- 2
1.1.3 System Configuration of Print/Send Options 1- 2
1.1.4 Functions of Print/Send Options 1- 3
1.1.5 Functions of Print/Send Options 1- 5
1.2 Product Specifications 1- 6
1.2.1 Names of Parts 1- 6
1.2.1.1 External View 1- 6
1.2.1.2 External View 1- 7
1.2.1.3 Cross Section 1- 8
1.2.2 Using the Machine 1- 9
1.2.2.1 Turning on the Power Switch 1- 9
1.2.2.2 Control Panel 1- 10
1.2.3 User Mode Items 1- 11
1.2.3.1 Overview 1- 11
1.2.3.2 Overview 1- 11
1.2.3.3 Paper Settings 1- 11
1.2.3.4 Paper Settings 1- 11
1.2.3.5 Volume Settings 1- 12
1.2.3.6 Volume Settings 1- 13
1.2.3.7 Common Settings 1- 14
1.2.3.8 Common Settings 1- 15
1.2.3.9 Communications Settings *3 ..... 1- 16
1.2.3.10 Communications Settings 1- 18
1.2.3.11 Address Book Settings 1- 20
1.2.3.12 Address Book Settings 1- 22
1.2.3.13 Printer Settings 1- 24
1.2.3.14 Printer Settings 1- 26
1.2.3.15 Timer Settings 1- 30
1.2.3.16 Timer Settings 1- 31
1.2.3.17 Adjustment/Cleaning 1- 32
1.2.3.18 Adjustment/Cleaning 1- 32
1.2.3.19 Report Settings 1- 32
1.2.3.20 Report Settings 1- 34
1.2.3.21 System Management Set. 1- 35
1.2.3.22 System Management Settings 1- 43
1.2.4 Maintenance by the User 1- 53
1.2.4.1 Cleaning 1- 53
1.2.4.2 Cleaning 1- 56
1.2.5 Safety 1- 59
1.2.5.1 Points to note at disassembly/assembly 1- 59
1.2.5.2 CDRH Regulations 1- 59
1.2.5.3 Safety of the Laser Light 1- 59
1.2.5.4 Handling the Laser Unit 1- 59
1.2.5.5 Safety of Toner 1- 60
1.2.5.6 Notes when handling a battery 1- 60
1.2.6 Product Specifications 1- 61
1.2.6.1 Main Body Specifications 1- 61
1.2.6.2 Main Body Specifications 1- 62
1.2.6.3 ADF Specifications 1- 64
1.2.6.4 ADF Specifications 1- 65
1.2.6.5 FAX Specifications 1- 66

1.2.6.6 FAX Specifications 1- 67
1.2.7 Function List 1- 68
1.2.7.1 Print Speed 1- 68
1.2.7.2 Print Speed 1- 69
1.2.7.3 Paper Type 1- 70

Chapter 2 Installation

2.1 Making Pre-Checks 2- 1
2.1.1 Checking Installation Environment 2- 1
2.1.2 Points to Note Before Installation 2- 1
2.1.3 Checking Contents 2- 2
2.2 Unpacking and Installation 2- 3
2.2.1 Unpacking 2- 3
2.2.2 Installation 2- 4
2.2.3 Installing Others 2- 5
2.2.4 Securing Product 2- 5
2.2.5 Cassette Settings 2- 6
2.2.6 Points to Note When Turning OFF Host Machine 2- 6
2.2.7 Connecting Cables 2- 6
2.2.8 Auto Gradation Adjustment 2- 6
2.3 Checking the Connection to the Network 2- 7
2.3.1 Setting Up the Network 2- 7
2.3.2 Procedure for Ping Operation 2- 7
2.3.3 Checking with Remote Host Address 2- 7
2.3.4 Troubleshooting Network Connection 2- 7
2.3.5 Checking with Loopback Address 2- 8
2.3.6 Checking with Local Host Address 2- 8
2.4 Checking the Images/Operations 2- 8
2.4.1 Checking Image Operation 2- 8
2.5 Installing the Card Reader 2- 8
2.5.1 Notice At Installation 2- 8
2.5.2 Checking the Contents 2- 8
2.5.3 Turning OFF the Power of the Host Machine 2- 9
2.5.4 Installation Procedure 2- 9
2.5.5 Card ID Registration 2- 10
2.5.6 Installation Procedure in the imageWARE Accounting Manager (hereinafter referred to iWAM) Environment 2- 12
2.6 Installing the Hand Set 2- 12
2.6.1 Points to Note At Installation 2- 12
2.6.2 Checking the Contents 2- 12
2.6.3 Turning OFF the Power of the Host Machine 2- 12
2.6.4 Installation Procedure 2- 12
2.7 Installing the Memory 2- 13
2.7.1 Checking the Contents 2- 13
2.7.2 Checking Before Memory Expansion 2- 14
2.7.3 Turning OFF the Power of the Host Machine 2- 14
2.7.4 Installation Procedure 2- 14
2.7.5 Checking After Memory Expansion 2- 14

Chapter 3 Basic Operation

3.1 Construction 3- 1
3.1.1 Functional Configuration 3- 1
3.1.2 Connecting the Main PCBs 3- 2
3.2 Basic Sequence 3- 3
3.2.1 Basic Sequence of Operation 3- 3

3.2.2 Power-On Sequence 3- 4

Chapter 4 Main Controller

4.1 Overview/Configuration 4- 1
4.1.1 Overview 4- 1
4.1.2 Configurations/functions 4- 2
4.2 Set-Up Sequence 4- 4
4.2.1 Overview 4- 4
4.2.2 Startup Sequence 4- 5
4.3 Image Processing 4- 6
4.3.1 Overview of the Image Flow 4- 6
4.3.2 Construction of the Image Processing Module 4- 6
4.3.3 Reader Unit Input Image Processing 4- 7
4.3.4 Compression/ Extesion/ Editing Block 4- 7
4.3.5 Printer unit Output Image Processing 4- 8
4.4 Image Data Flow 4- 9
4.4.1 Flow of Image Data According to Copy Functions 4- 9
4.4.2 Flow of Image Data for the SEND Function 4- 10
4.4.3 Flow of Image Data for the Fax Transmission 4- 10
4.4.4 Flow of Image Data for the Fax Reception Function 4- 11
4.4.5 Flow of Image Data for the PDL Function 4- 11
4.5 Parts Replacement Procedure 4- 12
4.5.1 Main Controller PCB 4- 12
4.5.1.1 Before Removing the Main Controller PCB 4- 12
4.5.1.2 Removing the Main Controller PCB 4- 12
4.5.1.3 Procedure after Replacing the Main Controller PCB 4- 12

Chapter 5 Original Exposure System

5.1 Basic Construction 5- 1
5.1.1 Overview 5- 1
5.1.2 Major Components 5- 1
5.2 Basic Sequence 5- 3
5.2.1 Basic Sequence of Operation at Power-on 5- 3
5.2.2 Basic Sequence of Operation in Response to a Press on the Start Key (book) 5- 4
5.2.3 Basic Sequence of Operation in Response to a Press on the Start Key (book) 5- 5
5.3 Various Control 5- 6
5.3.1 Lamp Control 5- 6
5.3.1.1 Overview 5- 6
5.3.2 Enlargement/Reduction 5- 7
5.3.2.1 Overview 5- 7
5.3.3 Detecting the Size of Originals 5- 7
5.3.3.1 Overview 5- 7
5.3.4 Dirt Sensor Control 5- 8
5.3.4.1 Overview 5- 8
5.3.4.2 Stream Reading Position Shift 5- 8
5.4 Parts Replacement Procedure 5- 9
5.4.1 ADF Unit + Reader Unit 5- 9
5.4.1.1 Before Removing the ADF Unit + Reader Unit 5- 9
5.4.1.2 Removing the ADF Unit + Reader Unit 5- 9
5.4.1.3 Procedure after Replacing the ADF Unit 5- 11
5.4.1.4 Procedure after Replacing the Reader Unit 5- 11
5.4.2 Reader Unit 5- 11
5.4.2.1 Before Removing the Reader Unit 5- 11
5.4.2.2 Removing the Reader Unit 5- 11
5.4.2.3 Procedure after Replacing the Reader Unit 5- 12

Chapter 6 Original Feeding System

6.1 Basic Construction 6- 1
6.1.1 Overview 6- 1
6.2 Basic Operation 6- 3
6.2.1 Operation Mode 6- 3
6.2.2 Document Size Detection 6- 5
6.3 Detection Jams 6- 6
6.3.1 Overview 6- 6
6.4 ADF/DADF 6- 7
6.4.1 ADF/DADF 6- 7
6.4.1.1 Removing the ADF unit 6- 7
6.4.1.2 Procedure after Replacing the ADF Unit 6- 8
6.4.2 Pickup Feed Unit 6- 8
6.4.2.1 Removing the ADF Pickup Feed Unit 6- 8
6.4.3 Pick-up Roller 6- 10
6.4.3.1 Removing the ADF Pickup Roller 6- 10
6.4.4 Separation Roller 6- 11
6.4.4.1 Removing the ADF Separation Roller 6- 11
6.4.5 Pick-up Motor 6- 12
6.4.5.1 Before Removing the ADF Pickup Motor 6- 12
6.4.5.2 Removing the ADF Pickup Motor 6- 12
6.4.6 Pick-up Solenoid 6- 13
6.4.6.1 Before Removing the ADF Pickup Solenoid 6- 13
6.4.6.2 Removing the ADF Pickup Solenoid 6- 13
6.4.7 Separation Pad 6- 14
6.4.7.1 Removing the ADF Separation Pad 6- 14

Chapter 7 Laser Exposure

7.1 Overview/Configuration 7- 1
7.1.1 Overview 7- 1
7.1.2 Overview 7- 3
7.2 Controlling the Laser 7- 5
7.2.1 Overview 7- 5
7.2.2 Overview 7- 6
7.2.3 Laser Light Emission Control 7- 7
7.2.4 Laser Light Intensity Control 7- 7
7.2.5 Laser Light Intensity Control 7- 7
7.2.6 Image Masking Control 7- 7
7.2.7 Failure Detection 7- 7
7.3 Controlling the Laser Scanner Motor 7- 8
7.3.1 Overview 7- 8
7.3.2 Failure Detection 7- 8
7.4 Parts Replacement Procedure 7- 9
7.4.1 Laser/Scanner Unit 7- 9
7.4.1.1 Before Removing the Laser Scanner Unit 7- 9
7.4.1.2 Removing the Laser Scanner Unit 7- 9

Chapter 8 Image Formation

8.1 Overview/Configuration 8- 1
8.1.1 Overview 8- 1
8.1.2 Print Process 8- 2
8.1.3 Electrostatic Latent Image Formation Block 8- 3
8.1.4 Development Block 8- 4
8.1.5 Transfer Block 8- 4

8.1.6 Fixing Block 8- 6
8.1.7 Cleaning Block 8- 6
8.2 Image Stabilization Control 8- 7
8.2.1 Overview 8- 7
8.2.2 Environmental Change Corrective Control 8- 8
8.2.3 D-half Control 8- 9
8.2.4 Color Displacement Corrective Control 8- 11
8.2.5 Auto Gradation Correction Control 8- 13
8.3 Toner Cartridge 8- 14
8.3.1 Overview 8- 14
8.3.2 Toner Level Detection 8- 15
8.3.3 Memory Tag Control 8- 15
8.3.4 Toner Cartridge Detection 8- 15
8.3.5 New Toner Cartridge Detection 8- 16
8.3.6 Developing Cylinder Engagement/disengagement Control 8- 17
8.4 Transfer Unit 8- 18
8.4.1 ETB Unit 8- 18
8.4.2 Automatic Bias Control 8- 19
8.4.3 ETB Cleaning 8- 20
8.4.4 Transfer Roller Engagement/disengagement Control 8- 21
8.5 Parts Replacement Procedure 8- 25
8.5.1 Drum Motor 8- 25
8.5.1.1 Before Removing the Drum Motor 8- 25
8.5.1.2 Removing the Drum Motor 8- 25
8.5.2 Main Drive Unit 8- 25
8.5.2.1 Before Removing the Main Drive Unit 8- 25
8.5.2.2 Removing the Main Drive Unit 8- 25
8.5.2.3 Point to Note When Installing the Main Drive Unit 8- 27
8.5.3 Developing Estrangement Solenoid 8- 29
8.5.3.1 Before Removing the Developing Disengage Solenoid 8- 29
8.5.3.2 Removing the Developing Disengage Solenoid 8- 29
8.5.3.3 Points to Note When Installing the Developing Disengage Solenoid 8- 30
8.5.4 ETB Unit 8- 30
8.5.4.1 Removing the ETB Unit 8- 30
8.5.5 ETB Motor 8- 31
8.5.5.1 Before Removing the ETB Motor 8- 31
8.5.5.2 Removing the ETB Motor 8- 31
8.5.6 ETB Estrangement Solenoid 8- 32
8.5.6.1 Before Removing the ETB Disengage Solenoid 8- 32
8.5.6.2 Removing the ETB Disengage Solenoid 8- 32
8.5.7 Color Displacement/Image Density Sensor 8- 33
8.5.7.1 Before Removing the Color Displacement/Density Sensor 8- 33
8.5.7.2 Removing the Color Displacement/Density Sensor 8- 33

Chapter 9 Pickup and Feed System

9.1 Overview/Configuration 9- 1
9.1.1 Overview 9- 1
9.1.2 Interval Speed Increase Control 9- 3
9.1.3 Interval Speed Increase Control 9- 4
9.2 Other Control 9- 5
9.2.1 Cassette Pickup Mechanism 9- 5
9.2.2 Manual Feed Pickup Mechanism 9- 6
9.2.3 Skew Correction 9- 7
9.2.4 Throughput-down Control 9- 8
9.2.5 Throughput-down Control 9- 9
9.2.6 Feeding Speed Control 9- 10

9.2.7 Feeding Speed Control....9- 10
9.2.8 Warp Control....9- 10
9.2.9 Delivery....9- 12
9.3 Detection Jams....9- 14
9.3.1 Jam Detection Outline....9- 14
9.3.1.1 Overview....9- 14
9.3.2 Delay Jams....9- 14
9.3.2.1 Pickup Delay JAM....9- 14
9.3.2.2 Delivery Delay JAM....9- 14
9.3.2.3 Duplexing Pickup Delay JAM....9- 14
9.3.2.4 Duplexing Reverse Unit Delay JAM....9- 14
9.3.3 Stationary Jams....9- 15
9.3.3.1 Pickup Stationary JAM....9- 15
9.3.3.2 Delivery Stationary JAM....9- 15
9.3.4 Other Jams....9- 15
9.3.4.1 Wrapping JAM....9- 15
9.3.4.2 Residual JAM....9- 15
9.3.4.3 Door Open JAM....9- 15
9.3.4.4 Automatic Delivery Function....9- 15
9.4 Duplex Feeding....9- 16
9.4.1 Overview....9- 16
9.4.2 Duplexing Feed Control....9- 17
9.4.3 Duplexing Pickup Operation....9- 20
9.5 Parts Replacement Procedure....9- 21
9.5.1 Pickup Feed Unit....9- 21
9.5.1.1 Before Removing the Pickup Feed Unit....9- 21
9.5.1.2 Removing the Pickup Feed Unit....9- 21
9.5.2 Cassette Pickup Roller....9- 22
9.5.2.1 Before Removing the Cassette Pickup Roller....9- 22
9.5.2.2 Removing the Cassette Pickup Roller....9- 22
9.5.3 Pickup Motor....9- 23
9.5.3.1 Before Removing the Pickup Motor....9- 23
9.5.3.2 Removing the Pickup Motor....9- 23
9.5.4 Cassette Pickup Solenoid....9- 24
9.5.4.1 Before Removing the Cassette Pickup Solenoid....9- 24
9.5.4.2 Removing the Cassette Pickup Solenoid....9- 24
9.5.5 Cassette Separation Pad....9- 26
9.5.5.1 Removing the Cassette Separation Pad....9- 26
9.5.6 Manual Pickup Roller....9- 26
9.5.6.1 Before Removing the Manual Feed Pickup Roller....9- 26
9.5.6.2 Removing the Manual Feed Pickup Roller....9- 26
9.5.7 Manual Pickup Solenoid....9- 26
9.5.7.1 Before Removing the Manual Feed Pickup Solenoid....9- 26
9.5.7.2 Removing the Manual Feed Pickup Solenoid....9- 26
9.5.8 Manual Separation Roller....9- 28
9.5.8.1 Before Removing the Manual Feed Separation Pad....9- 28
9.5.8.2 Removing the Manual Feed Separation Pad....9- 28
9.5.9 Duplexing Feed Motor....9- 29
9.5.9.1 Before Removing the Duplex Feed Motor....9- 29
9.5.9.2 Removing the Duplex Feed Motor....9- 29
9.5.10 Reverse Unit....9- 29
9.5.10.1 Before Removing the Reversal Unit....9- 29
9.5.10.2 Removing the Reversal Unit....9- 29
9.5.11 Reverse Motor....9- 31
9.5.11.1 Before Removing the Reversal Motor....9- 31
9.5.11.2 Removing the Reversal Motor....9- 31
9.5.12 Reverse Solenoid....9- 31
9.5.12.1 Before Removing the Reversal Solenoid....9- 31
9.5.12.2 Removing the Reversal Solenoid....9- 31

Chapter 10 Fixing System

10.1 Overview/Configuration 10- 1
10.1.1 Overview 10- 1
10.2 Various Control Mechanisms 10- 2
10.2.1 Controlling the Temperature of the Fixing Unit 10- 2
10.2.1.1 Fixing Temperature Control 10- 2
10.2.1.2 Throughput Down Control 10- 3
10.2.2 Fixing Pressurizing/Release Control 10- 4
10.2.2.1 Fixing Sleeve Pressuring/releasing Control 10- 4
10.2.2.2 Fixing Sleeve Pressuring/releasing Control 10- 5
10.3 Protection Function 10- 7
10.3.1 Overview 10- 7
10.3.2 Failure Detection 10- 7
10.4 Parts Replacement Procedure 10- 8
10.4.1 Fixing Unit 10- 8
10.4.1.1 Removing the Fixing Assembly 10- 8
10.4.2 Fixing Sleeve Unit 10- 8
10.4.2.1 Before Removing the Fixing Sleeve Unit 10- 8
10.4.2.2 Removing the Fixing Sleeve Unit 10- 8
10.4.3 Fixing Drive Unit 10- 12
10.4.3.1 Before Removing the Fixing Drive Unit 10- 12
10.4.3.2 Removing the Fixing Drive Unit 10- 12
10.4.4 Fixing Motor 10- 14
10.4.4.1 Before Removing the Fixing Motor 10- 14
10.4.4.2 Removing the Fixing Motor 10- 15

Chapter 11 External and Controls

11.1 DC Controller 11- 1
11.1.1 Overview 11- 1
11.1.2 Operation of Each Block 11- 2
11.1.3 Fan/Motor Control 11- 2
11.1.4 Drum motor failure detection 11- 3
11.1.5 ETB motor failure detection 11- 3
11.1.6 Fixing motor failure detection 11- 3
11.1.7 Main Unit Fan Failure Detection 11- 3
11.1.8 Duplex Fan Failure Detection 11- 3
11.2 Control Panel 11- 4
11.2.1 Overview 11- 4
11.3 Counter 11- 5
11.3.1 Overview 11- 5
11.3.2 Overview 11- 6
11.3.3 Timing of Increasing the Count 11- 6
11.4 Power Supply 11- 7
11.4.1 Power Supply 11- 7
11.4.1.1 Low-voltage Power Unit 11- 7
11.4.2 Protection Function 11- 8
11.4.2.1 Protective Function 11- 8
11.4.2.2 Safety 11- 8
11.4.3 Energy-Saving Function 11- 8
11.4.3.1 Overview 11- 8
11.5 Parts Replacement Procedure 11- 10
11.5.1 Front Cover 11- 10
11.5.1.1 Before Removing the Front Cover Unit 11- 10
11.5.1.2 Removing the Front Cover Unit 11- 10
11.5.2 Front Upper Cover 1 ..... 11- 11
11.5.2.1 Before Removing Front upper Cover 1 ..... 11- 11

11.5.2.2 Removing Front Upper Cover 1 ..... 11- 11
11.5.3 Rear Cover 11- 12
11.5.3.1 Removing the Rear Cover Unit 11- 12
11.5.4 Right Cover 11- 12
11.5.4.1 Before Removing the Right Cover 11- 12
11.5.4.2 Removing the Right Cover 11- 12
11.5.5 Left Cover 11- 14
11.5.5.1 Before Removing the Left Cover 11- 14
11.5.5.2 Removing the Left Cover 11- 14
11.5.6 Delivery Tray Cover 11- 15
11.5.6.1 Before Removing the Delivery Tray Cover 11- 15
11.5.6.2 Removing the Delivery Tray Cover 11- 15
11.5.7 Power Station Cover 11- 16
11.5.7.1 Before Removing the Electrical Components Cover 11- 16
11.5.7.2 Removing the Electrical Components Cover 11- 16
11.5.8 Controller Box 11- 16
11.5.8.1 Before Removing the Controller Box 11- 16
11.5.8.2 Removing the Controller Box 11- 16
11.5.9 Laser Scanner Cover 11- 17
11.5.9.1 Before Removing the Laser Scanner Cover 11- 17
11.5.9.2 Removing the Laser Scanner Cover 11- 17
11.5.10 Upper Frame Unit 11- 20
11.5.10.1 Before Removing the Upper Frame Unit 11- 20
11.5.10.2 Removing the Upper Frame Unit 11- 20
11.5.11 Operation Panel Unit 11- 22
11.5.11.1 Removing the Control Panel Unit 11- 22
11.5.11.2 Procedure after Replacing the Control Panel 11- 23
11.5.12 NCU Board 11- 23
11.5.12.1 Before Removing the NCU PCB 11- 23
11.5.12.2 Removing the NCU PCB 11- 23
11.5.13 DC Controller PCB 11- 24
11.5.13.1 Before Removing the DC Controller PCB 11- 24
11.5.13.2 Removing the DC Controller PCB 11- 24
11.5.13.3 Procedure after Replacing the DC controller PCB 11- 24
11.5.14 Memory Controller PCB 11- 24
11.5.14.1 Before Removing the Memory Controller PCB 11- 24
11.5.14.2 Removing the Memory Controller PCB 11- 24
11.5.15 Duplexing Driver PCB 11- 25
11.5.15.1 Before Removing the Duplex Driver PCB 11- 25
11.5.15.2 Removing the Duplex Driver PCB 11- 25
11.5.16 Low-voltage Power Supply PCB 11- 25
11.5.16.1 Before Removing the Low-Voltage Power Supply PCB 11- 25
11.5.16.2 Removing the Low Voltage Power Supply PCB 11- 25
11.5.17 High-voltage Power Supply PCB 11- 26
11.5.17.1 Before Removing the High Voltage Power Supply PCB 11- 26
11.5.17.2 Removing the High Voltage Power Supply PCB 11- 27
11.5.18 Off Hook PCB 11- 27
11.5.18.1 Before Removing the Off Hook PCB 11- 27
11.5.18.2 Removing the Off Hook PCB 11- 27
11.5.19 Cooling Fan 11- 27
11.5.19.1 Before Removing the Cooling Fan 11- 27
11.5.19.2 Removing the Cooling Fan 11- 27
11.5.20 Duplex Fan 11- 28
11.5.20.1 Before Removing the Duplex Fan 11- 28
11.5.20.2 Removing the Duplex Fan 11- 28

Chapter 12 e-Maintenance/imageWARE Remote

12.1 e-Maintenance/imageWARE Remote 12- 1
12.1.1 Overview 12- 1

12.1.2 Setting Procedure 12- 1
12.1.3 Troubleshooting guide 12- 10
12.1.4 Service cautions 12- 12
12.1.5 Overview 12- 13
12.1.6 Service cautions 12- 14
12.1.7 Setting Procedure 12- 15
12.1.8 FAQ 12- 28
12.1.9 Troubleshooting 12- 29
12.1.10 Error code and strings 12- 32

Chapter 13 Maintenance and Inspection

13.1 Periodically Replaced Parts 13- 1
13.1.1 Periodically Replaced Parts 13- 1
13.2 Consumables 13- 1
13.2.1 Expected Service Life of Consumable Parts 13- 1
13.3 Periodical Service 13- 1
13.3.1 Periodic Service 13- 1

Chapter 14 Measurement and Adjustments

14.1 Scanning System 14- 1
14.1.1 Procedure after Replacing the Copyboard Glass 14- 1
14.1.2 Procedure after Replacing the Reader Unit 14- 1
14.2 Fixing System 14- 1
14.2.1 Checking the Nip Width (fixing pressure roller) 14- 1
14.3 Electrical Components 14- 1
14.3.1 Procedure after Replacing the DC controller PCB 14- 1
14.3.2 Procedure after Replacing the Main Controller PCB 14- 1
14.3.3 Procedure after Clearing RAM Data 14- 1
14.3.4 Procedure after Replacing the Control Panel 14- 2
14.4 ADF 14- 2
14.4.1 Outline 14- 2
14.4.1.1 Procedure after Replacing the ADF Unit 14- 2

Chapter 15 Correcting Faulty Images

15.1 Initial Checkup 15- 1
15.1.1 Initial Check 15- 1
15.2 Test Printing 15- 2
15.2.1 Test Printing 15- 2
15.3 Outline of Electrical Components 15- 6
15.3.1 Clutch/Solenoid 15- 6
15.3.1.1 Solenoids 15- 6
15.3.2 Motor/Fan 15- 7
15.3.2.1 Motors 15- 7
15.3.2.2 Fans 15- 8
15.3.3 Sensor 15- 9
15.3.3.1 Sensors 15- 9
15.3.4 Switch 15- 11
15.3.4.1 Switches, Speaker, and Thermistors 15- 11
15.3.5 PCBs 15- 13
15.3.5.1 PCBs 15- 13
15.3.6 Location of Convectors 15- 15
15.3.6.1 Location of Connectors 15- 15

Chapter 16 Error Code

16.1 Error Code Table 16- 1
16.1.1 Error Code Table 16- 1
16.2 Error Code Details 16- 2
16.2.1 Error Code Details 16- 2
16.3 Jam Code 16- 8
16.3.1 Jam Code (main body) 16- 8
16.3.2 Jam Code (ADF) 16- 8
16.4 Alarm Code 16- 9
16.4.1 Alarm Code (ADF) 16- 9
16.5 Fax Error Codes 16- 9
16.5.1 Outline 16- 9
16.5.1.1 Error Code Outline 16- 9
16.5.2 User Error Code 16- 9
16.5.2.1 User Error Code 16- 9
16.5.3 Service Error Code 16- 9
16.5.3.1 Service Error Code 16- 9

Chapter 17 Special Management Mode

17.1 Overview 17- 1
17.1.1 Preface 17- 1
17.1.2 Entering the Special Management Mode 17- 1
17.1.3 Menu List 17- 2
17.2 Troubleshooting 17- 3
17.2.1 Pre-Check 17- 3
17.2.2 User Request 17- 3
17.2.3 Paper Error 17- 3
17.2.4 Image error 17- 3

Chapter 18 Service Mode

18.1 Outline 18- 1
18.1.1 Service Mode Configuration 18- 1
18.1.2 Service Mode Configuration 18- 3
18.1.3 Exiting Service Mode 18- 5
18.1.4 Exiting Service Mode 18- 5
18.1.5 Service Mode Backup 18- 5
18.1.6 Service Mode Backup 18- 6
18.1.7 Service Mode Screen Operation 18- 7
18.1.8 Service Mode Screen Operation 18- 9
18.2 COPIER 18- 11
18.2.1 DISPLAY 18- 11
18.2.1.1 DISPLAY List 18- 11
18.2.1.2 DISPLAY List 18- 11
18.2.2 I/O 18- 12
18.2.2.1 R-CON 18- 12
18.2.2.2 R-CON 18- 12
18.2.3 ADJUST 18- 12
18.2.3.1 ADJUST List 18- 12
18.2.3.2 ADJUST List 18- 17
18.2.4 FUNCTION 18- 21
18.2.4.1 FUNCTION List 18- 21
18.2.4.2 FUNCTION List 18- 26
18.2.4.3 Adjustment of the ACS identification level 18- 32
18.2.4.4 Adjustment of the ACS identification level 18- 33

18.2.5 OPTION 18- 33
18.2.5.1 OPTION List 18- 33
18.2.5.2 OPTION List 18- 43
18.2.6 COUNTER 18- 53
18.2.6.1 COUNTER List 18- 53
18.2.6.2 COUNTER List 18- 54
18.3 FEEDER 18- 56
18.3.1 ADJUST 18- 56
18.3.1.1 ADJUST List 18- 56
18.3.1.2 ADJUST List 18- 56
18.3.2 FUNCTION 18- 56
18.3.2.1 FUNCTION List 18- 56
18.3.2.2 FUNCTION List 18- 56
18.4 FAX 18- 57
18.4.1 SSSW 18- 57
18.4.1.1 SSSW List 18- 57
18.4.1.2 SSSW List 18- 58
18.4.2 MENU 18- 59
18.4.2.1 MENU List 18- 59
18.4.2.2 MENU List 18- 59
18.4.3 NUM 18- 60
18.4.3.1 NUM List 18- 60
18.4.3.2 NUM List 18- 60
18.4.4 NCU 18- 61
18.4.4.1 NCU List 18- 61
18.5 TESTMODE 18- 65
18.5.1 SYSTEM 18- 65
18.5.1.1 SYSTEM List 18- 65
18.5.1.2 SYSTEM List 18- 66
18.5.2 SCAN 18- 67
18.5.2.1 SCAN List 18- 67
18.5.2.2 SCAN List 18- 67
18.5.3 PRINT 18- 68
18.5.3.1 PRINT List 18- 68
18.5.3.2 PRINT List 18- 69
18.5.4 FAX 18- 69
18.5.4.1 FAX List 18- 69
18.5.4.2 FAX List 18- 70
18.5.5 PANEL 18- 71
18.5.5.1 PANEL List 18- 71
18.5.5.2 PANEL List 18- 73

Chapter 19 Upgrading

19.1 Outline 19- 1
19.1.1 Overview of Upgrade 19- 1
19.2 Making Preparations 19- 2
19.2.1 Required System Environment 19- 2
19.2.2 Before Upgrade 19- 2
19.3 Downloading System Software 19- 3
19.3.1 Downloading the System Software 19- 3
19.3.1.1 Downloading Procedure 19- 3
19.3.1.2 Downloading Procedure 19- 7

Chapter 20 Service Tools

20.1 Service Tools 20- 1
20.1.1 Special Tools 20- 1

20.1.2 Standard Tools....20- 1
20.1.3 Special Tools....20- 2
20.1.4 Standard Tools....20- 2
20.1.5 Solvent/Oil List....20- 3
20.1.6 Solvent/Oil List....20- 3

Chapter 1 Introduction

Contents

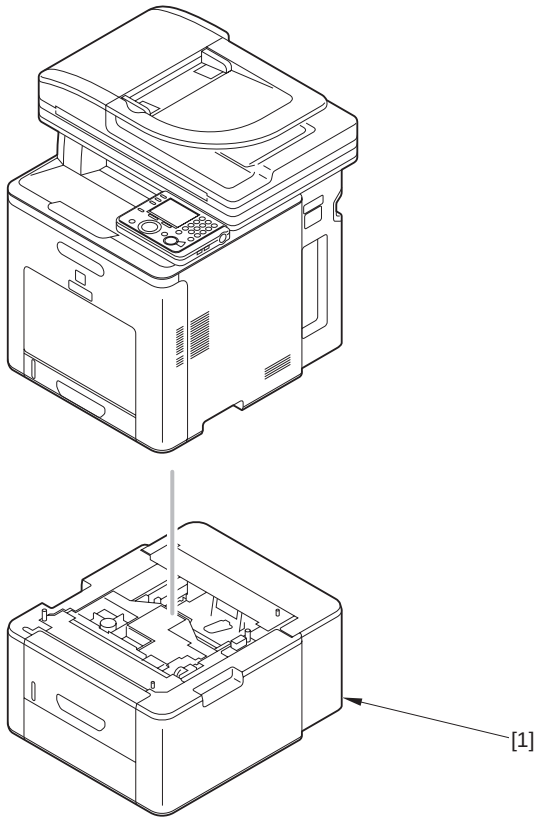
1.1 System Construction 1-1
1.1.1 System Configuration of Pickup/Delivery Options 1-1
1.1.2 System Configuration of Print/Send Options 1-2
1.1.3 System Configuration of Print/Send Options 1-2
1.1.4 Functions of Print/Send Options 1-3
1.1.5 Functions of Print/Send Options 1-5
1.2 Product Specifications 1-6
1.2.1 Names of Parts 1-6
1.2.1.1 External View 1-6
1.2.1.2 External View 1-7
1.2.1.3 Cross Section 1-8
1.2.2 Using the Machine 1-9
1.2.2.1 Turning on the Power Switch 1-9
1.2.2.2 Control Panel 1-10
1.2.3 User Mode Items 1-11
1.2.3.1 Overview 1-11
1.2.3.2 Overview 1-11
1.2.3.3 Paper Settings 1-11
1.2.3.4 Paper Settings 1-11
1.2.3.5 Volume Settings 1-12
1.2.3.6 Volume Settings 1-13
1.2.3.7 Common Settings 1-14
1.2.3.8 Common Settings 1-15
1.2.3.9 Communications Settings *3 1-16
1.2.3.10 Communications Settings 1-18
1.2.3.11 Address Book Settings 1-20
1.2.3.12 Address Book Settings 1-22
1.2.3.13 Printer Settings 1-24
1.2.3.14 Printer Settings 1-26
1.2.3.15 Timer Settings 1-30
1.2.3.16 Timer Settings 1-31
1.2.3.17 Adjustment/Cleaning 1-32
1.2.3.18 Adjustment/Cleaning 1-32
1.2.3.19 Report Settings 1-32
1.2.3.20 Report Settings 1-34
1.2.3.21 System Management Set. 1-35
1.2.3.22 System Management Settings 1-43
1.2.4 Maintenance by the User 1-53
1.2.4.1 Cleaning 1-53
1.2.4.2 Cleaning 1-56
1.2.5 Safety 1-59
1.2.5.1 Points to note at disassembly/assembly 1-59
1.2.5.2 CDRH Regulations 1-59
1.2.5.3 Safety of the Laser Light 1-59
1.2.5.4 Handling the Laser Unit 1-59
1.2.5.5 Safety of Toner 1-60
1.2.5.6 Notes when handling a battery 1-60
1.2.6 Product Specifications 1-61
1.2.6.1 Main Body Specifications 1-61
1.2.6.2 Main Body Specifications 1-62
1.2.6.3 ADF Specifications 1-64
1.2.6.4 ADF Specifications 1-65
1.2.6.5 FAX Specifications 1-66
1.2.6.6 FAX Specifications 1-67

1.2.7 Function List 1-68
1.2.7.1 Print Speed 1-68
1.2.7.2 Print Speed 1-69
1.2.7.3 Paper Type 1-70

1.1 System Construction

1.1.1 System Configuration of Pickup/Delivery Options

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

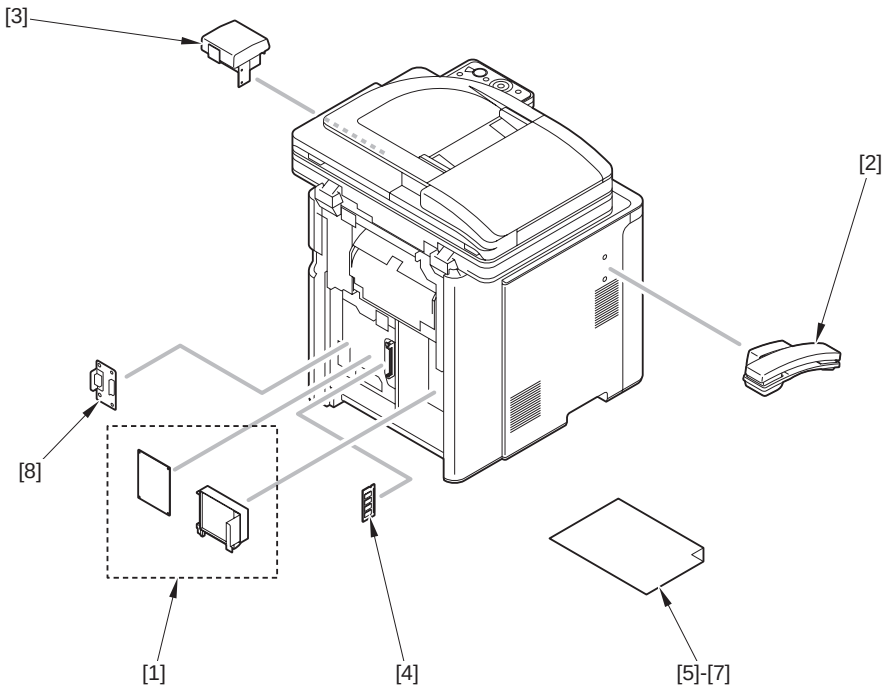


F-1-1

[1] Cassette Feeding Unit-AB1

1.1.2 System Configuration of Print/Send Options

imageRUNNER C1022 / imageRUNNER C1022i



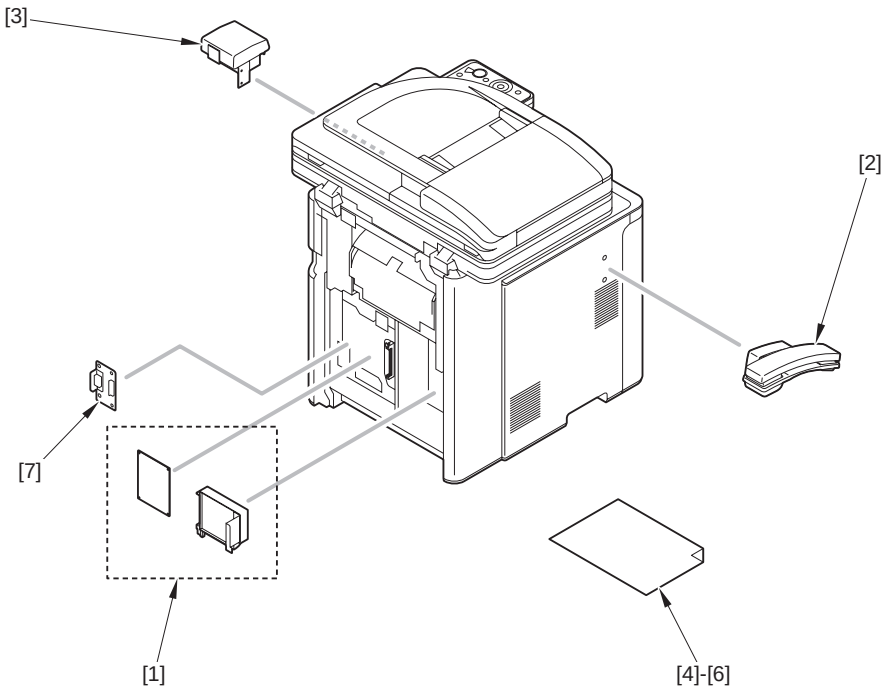
F-1-2

[1]	Super G3 Fax Board-AB1	[2]	HANDSET-J1 *1
[3]	Card Reader-E1 Card Reader Attachment Kit-F1	[4]	System Upgrade RAM-A1 *2
[5]	Color Send Kit-W1 *2	[6]	PCL Printer Kit-Y1 *3
[7]	Barcode Printing Kit-C1 *4	[8]	Serial Interface Kit-J1 *5

*1:	For all excluding Europe, KR	*2:	For North America, AUS, KR only
*3:	For all excluding JP, Europe	*4:	Except Japan
*5:	For North America only		

1.1.3 System Configuration of Print/Send Options

Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-1-3

[1] Super G3 Fax Board-AB1 *1
[2] HANDSET-J1 *2
[3] Card Reader-E1
Card Reader Attachment Kit-F1
[4] PCL Printer Kit-AK1 *3
[5] PS Printer Kit-AK1 *4
[6] Barcode Printing Kit-C1
[7] Serial Interface Kit-J2 *5

*1: iR C1028(CHN,SPL:Option)
iR C1028i(EUR:Option)
iR C1028iF(EUR,KOR:Standard)
iR C1030(North America,South America:Option)
iR C1030iF(North America,South America:Standard)

*2: iR C1028(CHN,SPL,HK,South America:Option)
iR C1028iF(AUS:Option)
iR C1030(North America,South America:Option)

*3: iR C1028(CHN,SPL,HK,South America:Option)
iR C1030(North America,South America:Option)

*4: iR C1028(CHN,SPL,HK,South America:Option)
iR C1028i(EUR:Option)
iR C1028iF(EUR,AUS,KOR:Option)
iR C1030(North America,South America:Option)
iR C1030iF(North America,South America:Option)

*5: iR C1028i(EUR:Option)
iR C1028iF(EUR:Option)
iR C1030(North America,South America:Option)
iR C1030iF(North America,South America:Option)

1.1.4 Functions of Print/Send Options

imageRUNNER C1022 / imageRUNNER C1022i

T-1-1

Machine Function	Optional Equipment Needed	Simultaneous Installation	
		Required	Limitations
Send Function	Color Send Kit-W1	-	-
Fax Function	Super G3 Fax Board-AB1	-	-
	HANDSET-J1	Super G3 Fax Board-AB1	-

Machine Function	Optional Equipment Needed	Simultaneous Installation	
		Required	Limitations
Department ID Management	Card Reader-E1	Card Reader Attachment Kit-F1	-
Barcode Printing	Barcode Printing Kit-C1	PCL Printer Kit-Y1	-
512MB expansion DIMM	System Upgrade RAM-A1	-	-
PCL Print	PCL Printer Kit-Y1	-	-

1.1.5 Functions of Print/Send Options

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-1-2

Machine Function	Optional Equipment Needed	Simultaneous Installation	
		Required	Limitations
Fax Function	Super G3 Fax Board-AB1	-	-
	HANDSET-J1	Super G3 Fax Board-AB1	-
Department ID Management	Card Reader-E1	Card Reader Attachment Kit-F1	-
Barcode Printing	Barcode Printing Kit-C1	PCL Printer Kit-AK1	-
PCL Print	PCL Printer Kit-AK1	-	-
PS Print	PS Printer Kit-AK1	-	-

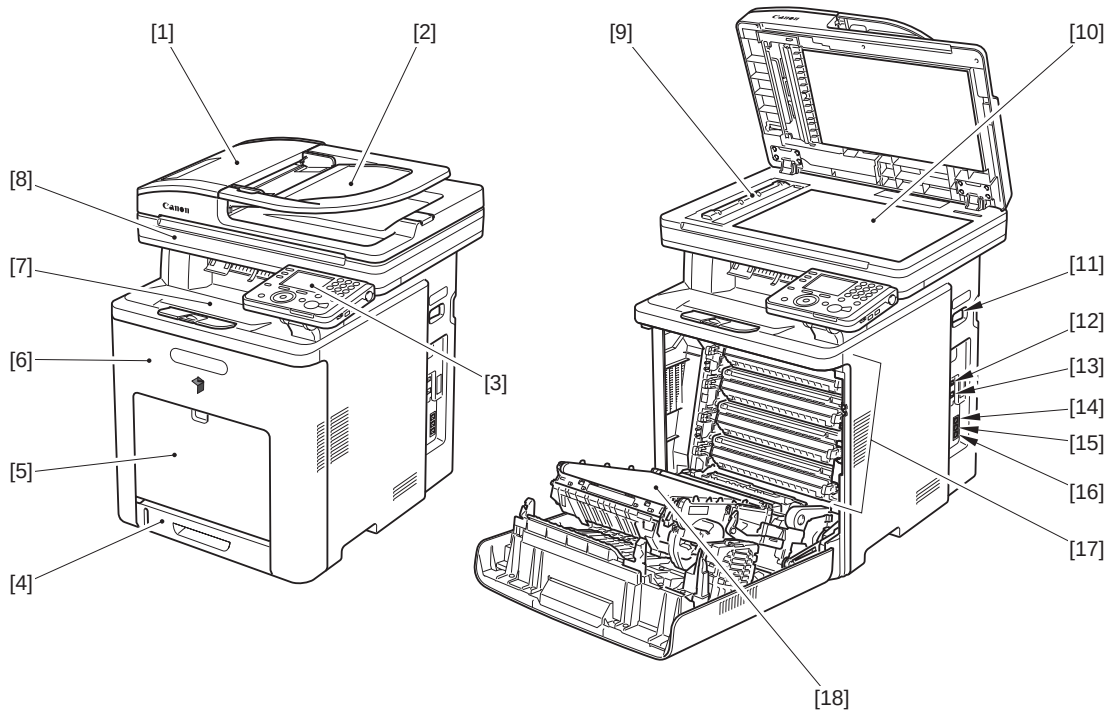
1.2 Product Specifications

1.2.1 Names of Parts

1.2.1.1 External View

imageRUNNER C1022 / imageRUNNER C1022i

<Front>

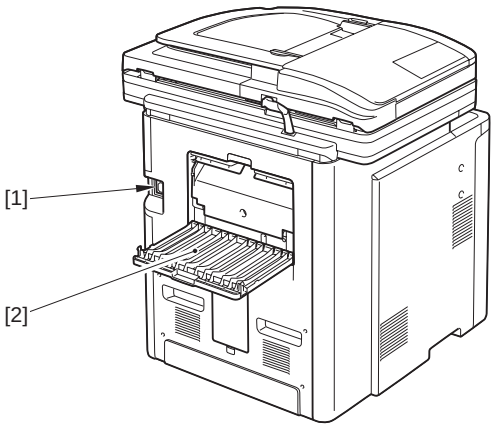


F-1-4

[1]	Feeder	[2]	ADF Tray
[3]	Control Panel	[4]	Cassette 1
[5]	Manual feed tray	[6]	Front Cover
[7]	Delivery tray	[8]	Reader Unit
[9]	Scanning Area	[10]	Platen Glass
[11]	Main Power Switch	[12]	USB Port
[13]	Ethernet Port	[14]	Handset Jack *
[15]	External Device Jack *	[16]	Telephone Line Jack *
[17]	Toner Cartridges	[18]	ETB Unit

*: Can be used in the case that the Super G3FAX board is installed (Pre-installed in FAX model).

<Rear>



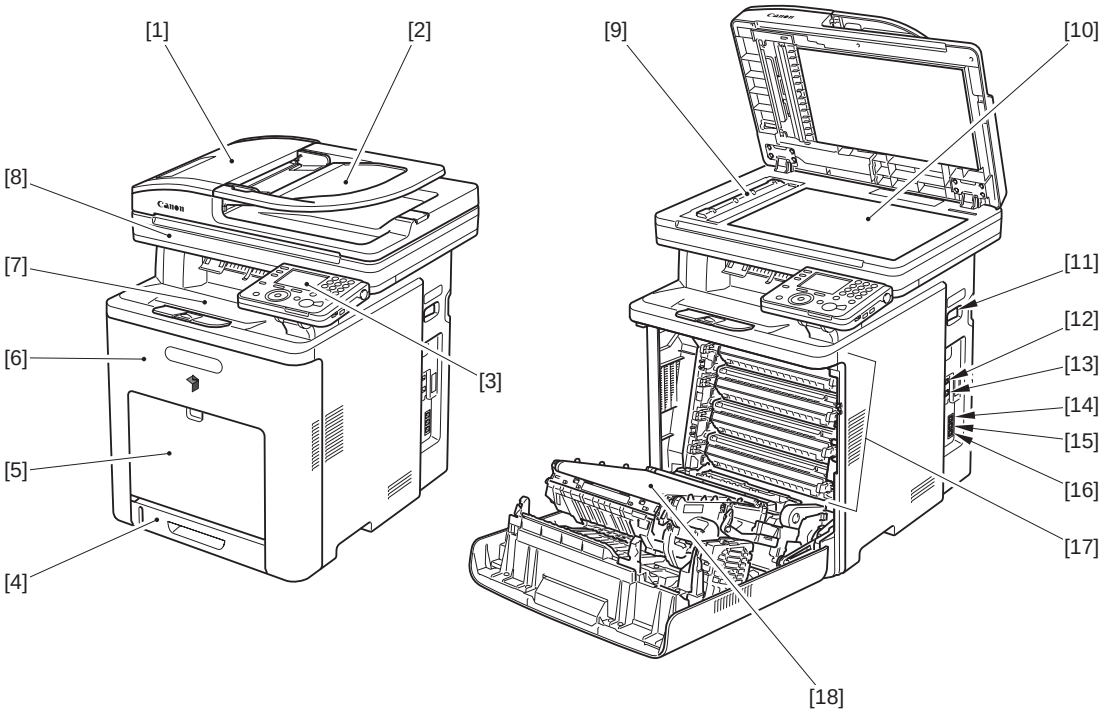
F-1-5

[1]	Power Socket	[2]	Jam removal cover

1.2.1.2 External View

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<Front>

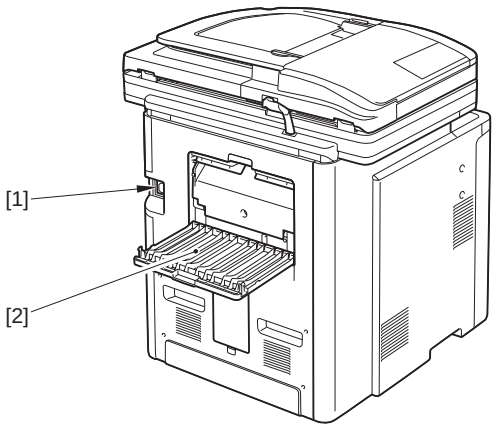


F-1-6

[1]	Feeder	[2]	ADF Tray
[3]	Control Panel	[4]	Cassette 1
[5]	Manual feed tray	[6]	Front Cover
[7]	Delivery tray	[8]	Reader Unit
[9]	Scanning Area	[10]	Platen Glass
[11]	Main Power Switch	[12]	USB Port
[13]	Ethernet Port	[14]	Handset Jack *
[15]	External Device Jack *	[16]	Telephone Line Jack *
[17]	Toner Cartridges	[18]	ETB Unit

*: Can be used in the case that the Super G3FAX board is installed (Pre-installed in FAX model).

<Rear>



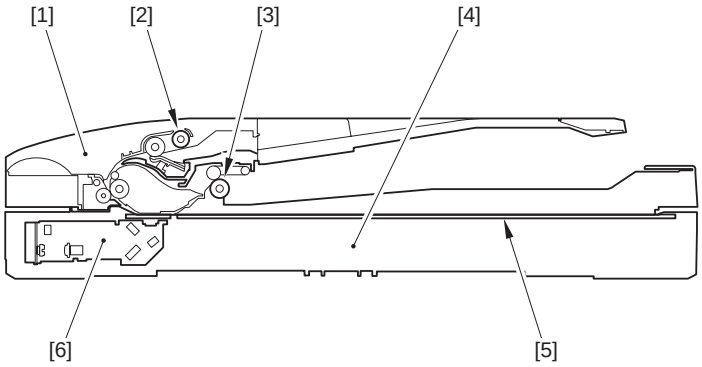
F-1-7

[1]	Power Socket	[2]	Jam removal cover

1.2.1.3 Cross Section

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

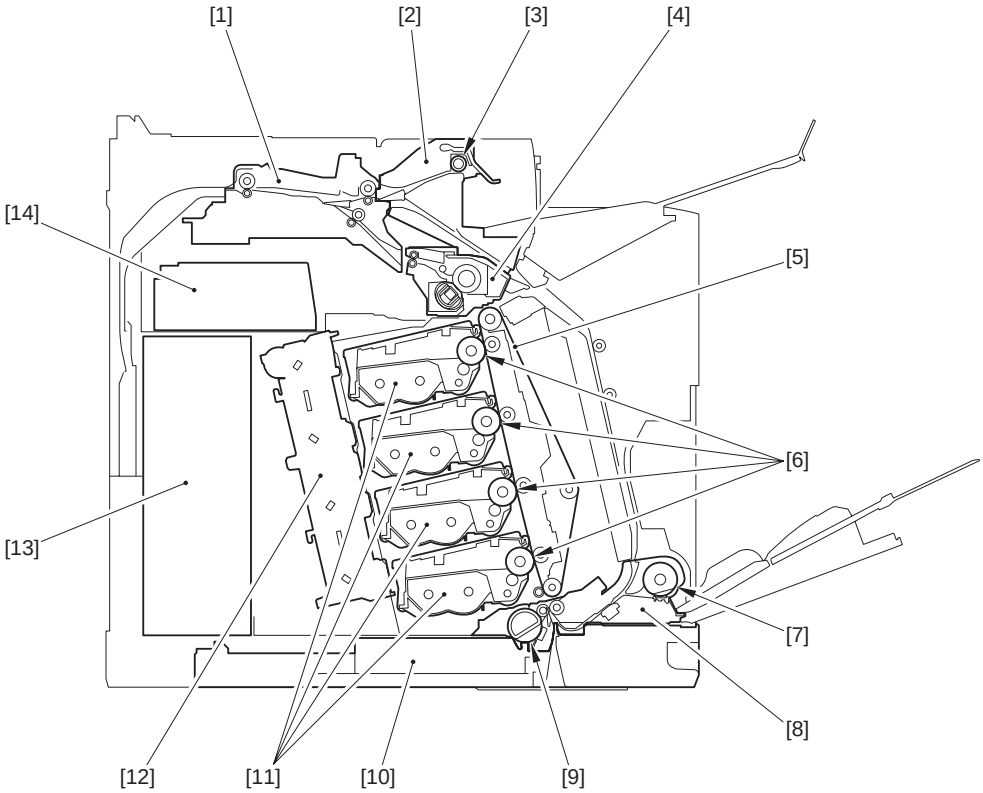
<ADF / Reader>



F-1-8

[1]	ADF unit	[2]	ADF pickup roller
[3]	ADF delivery roller	[4]	Reader unit
[5]	Platen glass	[6]	CCD unit

<Main Body>



F-1-9

[1]	Reverse unit	[2]	Delivery unit
[3]	Delivery roller	[4]	Fixing unit
[5]	ETB unit	[6]	Photosensitive drum
[7]	Manual pickup roller	[8]	Pickup / feed unit
[9]	Cassette pickup roller	[10]	Cassette 1
[11]	Toner Cartridges	[12]	Laser scanner unit
[13]	Controller box	[14]	Low-voltage power supply PCB

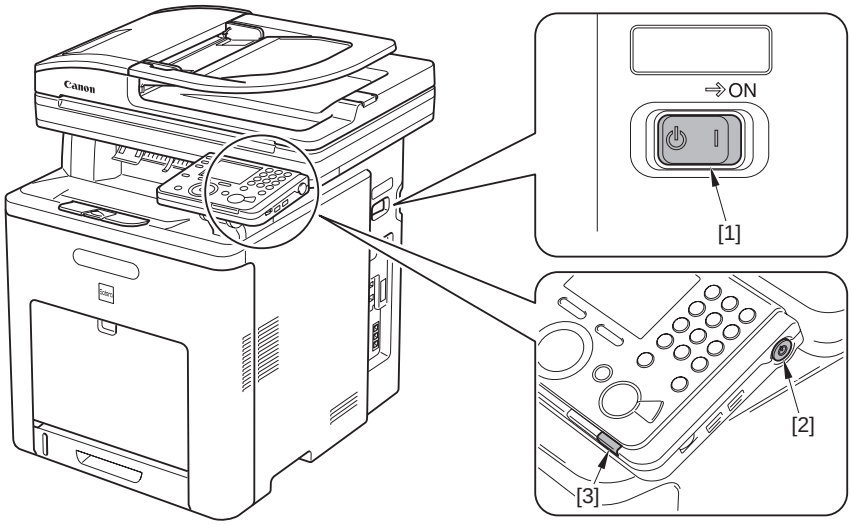
1.2.2 Using the Machine

1.2.2.1 Turning on the Power Switch

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine is equipped with the "main power switch" and "control panel power switch".

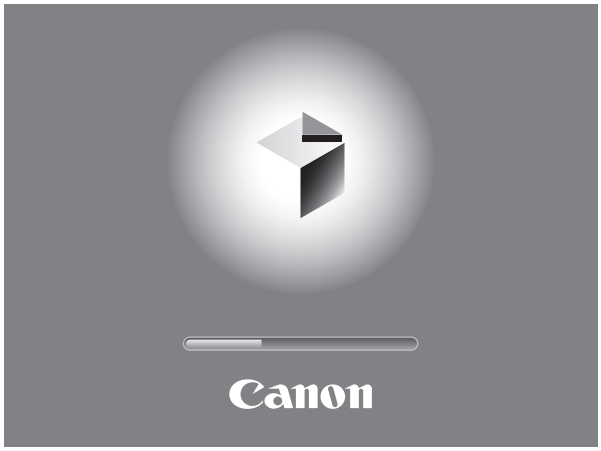
- Main power switch: Used to turns OFF/ON the machine.
- Control panel power switch: Used to enter the power save mode/low power mode/sleep mode.



F-1-10

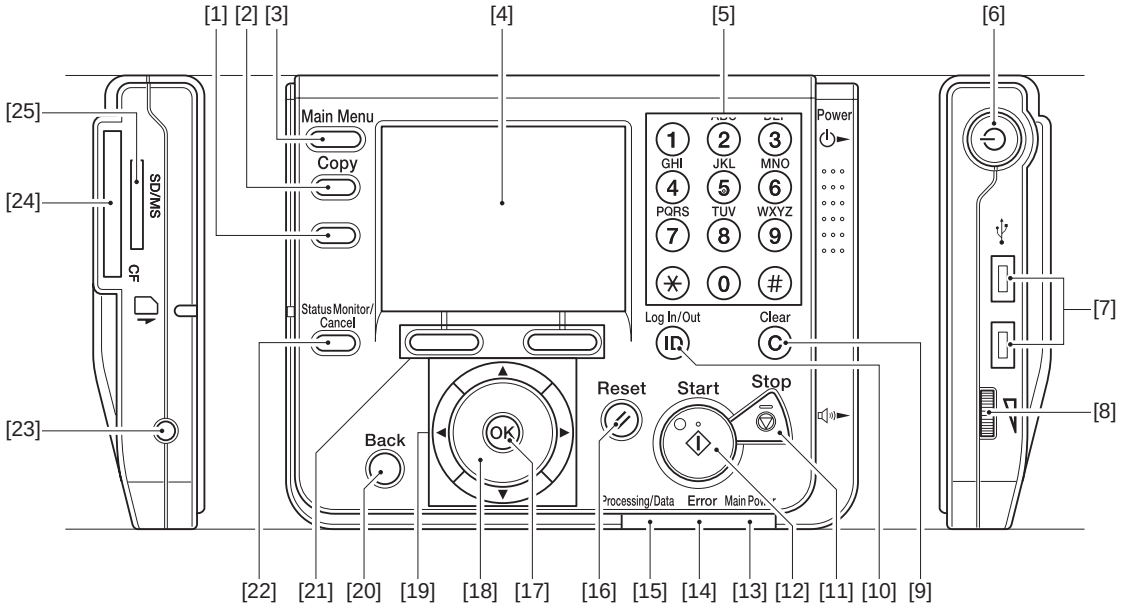
[1] Main power switch [2] Control panel power switch
[3] Main power lamp

MEMO:
Since the machine is not equipped with HDD, the main power can be turned OFF during a period when the progress bar is displayed.



1.2.2.2 Control Panel

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-1-11

[1]	Custom key 2	[2]	Custom key 1
[3]	Main Menu key	[4]	Display
[5]	Numeric keys	[6]	Power switch (sub power supply)
[7]	USB slot	[8]	Volume control dial
[9]	Clear key	[10]	Log in/out key
[11]	Stop key	[12]	Start key
[13]	Main Power indicator	[14]	Error indicator
[15]	Processing/Data indicator	[16]	Reset key
[17]	OK key	[18]	Scroll wheel
[19]	▲, ▼, ◄, ► keys	[20]	Back key
[21]	Any key	[22]	Status monitor/Cancel key
[23]	Counter check key	[24]	CF card slot
[25]	SD/MS card slot		

1.2.3 User Mode Items

1.2.3.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i

The following are the user mode setting items.

MEMO:
- Drawer 2 is an option cassette.
- Some setting items are displayed by pressing the left/right Any key. Perform operations by referring to the functions of the left/right Any key displayed at the bottom of the screen.

- Depending on the country of purchase, some settings may not be available.
- The menus described in this section are based on the model Color imageRUNNER C1022i.
- Depending on the model of your machine, some settings may not be available.

1.2.3.2 Overview

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The following are the user mode setting items.

MEMO:
- Depending on the country of purchase, some settings may not be available.
- The menus described in this section are based on the model Color imageCLASS MF9280Cdn.
- Depending on the model of your machine, some settings may not be available.

1.2.3.3 Paper Settings

imageRUNNER C1022 / imageRUNNER C1022i

*: default settings
*1: Only when the Cassette Feeding Unit-AB1 is attached.

T-1-3

Paper Settings		
Item		**Settings**
Stack Bypass Paper (Std.)		OFF*/ON
	Paper Size	Inch Size : LTR, LGL, STMT, EXEC, FLSC, OFI, B-OFI, M-OFI, G-LTR, G-LGL, Custom Size, COM10, Monarch, DL, ISO-C5, ISO-B5 A/B Size : A4, A5, B5 (*: A4(For all excluding USA, Canada), LTR(Only for USA, Canada))
	Paper Type	Plain *, Plain H, Recycled Paper, Color, Bond, Heavy 1, Heavy 2, Transparencies, Labels, Rough
Drawer 1		
	Paper Size	Inch Size : LTR, LGL, EXEC, FLSC, OFI, B-OFI, M-OFI A/B Size : A4, A5, B5 (*: A4(For all excluding USA, Canada), LTR(Only for USA, Canada))
	Paper Type	Plain *, Plain H, Recycled Paper, Color, Bond, Heavy 1, Rough
Drawer 2 *1		
	Paper Size	Inch Size : LTR, LGL, EXEC, FLSC, OFI, B-OFI, M-OFI A/B Size : A4, A5, B5 (*: A4(For all excluding USA, Canada), LTR(Only for USA, Canada))
	Paper Type	Plain *, Plain H, Recycled Paper, Color, Bond, Heavy 1, Rough

1.2.3.4 Paper Settings

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

*: default settings
*1: Only when the Cassette Feeding Unit-AB1 is attached.

T-1-4

Paper Settings		
Item		**Settings**
Stack Bypass Paper (Std.)		OFF*/ON
	Paper Size	Inch Size : LTR*, LGL, STMT, EXEC, FLSC, OFI, B-OFI, M-OFI, G-LTR, G-LGL, Custom Size, COM10, Monarch, DL, ISO-C5, ISO-B5 A/B Size : A4, A5, B5
	Paper Type	Plain 1, Plain 2*, Recycled Paper, Color, Bond, Heavy 1, Heavy 2, Transparencies, Labels, Envelope
Drawer 1		
	Paper Size	Inch Size : LTR*, LGL, EXEC, FLSC, OFI, B-OFI, M-OFI A/B Size : A4, A5, B5
	Paper Type	Plain 1, Plain 2*, Recycled Paper, Color, Bond, Heavy 1
Drawer 2 *1		
	Paper Size	Inch Size : LTR*, LGL, EXEC, FLSC, OFI, B-OFI, M-OFI A/B Size : A4, A5, B5
	Paper Type	Plain 1, Plain 2*, Recycled Paper, Color, Bond, Heavy 1
Custom Size		Size 1/ Size 2

1.2.3.5 Volume Settings

imageRUNNER C1022 / imageRUNNER C1022i

*: default settings
*3: Only when the Super G3 FAX Board is attached.

T-1-5

Volume Settings	
Item	**Settings**
Monitor Volume Settings *3	Volume Key Setting Priority *, Screen Settings Priority
Send Tone	ON*/OFF
Volume	1*-3
Audible Tones	
Incoming Ring *3	ON*/OFF
Volume	1*-3
Entry Tone	ON*/OFF
Volume	1*-3
Warning Tone	ON*/OFF
Volume	1*-3
TX Done Tone	ON*/OFF
Volume	1*-3
Receive Tone *3	ON*/OFF
Volume	1*-3
Print Done Tone	ON*/OFF
Volume	1*-3
Scan Done Tone	ON*/OFF
Volume	1*-3

1.2.3.6 Volume Settings

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

*: default settings
*1: Only for the Color imageRUNNER C1030iF or C1030 with the optional Super G3 FAX Board attached.

T-1-6

Volume Settings	
Item	**Settings**
Monitor Volume Settings *1	Volume Key Setting Priority *, Screen Settings Priority
Audible Tones	
Incoming Ring *1	ON*/OFF
Volume	1*-3
Entry Tone	ON*/OFF
Volume	1*-3
Error Tone	ON*/OFF
Volume	1*-3
TX Done Tone	ON*/OFF
Volume	1*-3
Receive Done Tone	ON*/OFF
Volume	1*-3
Print Done Tone	ON*/OFF
Volume	1*-3
Scan Done Tone	ON*/OFF
Volume	1*-3

1.2.3.7 Common Settings

imageRUNNER C1022 / imageRUNNER C1022i

*: default settings
*1: Only when the Cassette Feeding Unit-AB1 is attached.
*4: Only when the appropriate optional equipment is attached.

T-1-7

Common Settings	
Item	**Settings**
Initial Function Settings	
Select Initial Function	Main Menu *, Copy, Scan to Send, Scan to Store, Direct Print
Set System Monitor to Def.	OFF*/ON
Device Priority	OFF*/ON
Custom Key Registration	
Key 1	Copy *, Send/Fax *4, Scan to Send *4, FAX *4, E-mail *4, I-Fax *4, File Server *4, Send Log, Address Book *4, Favorites *4, One-touch *4, Scan to Store, Store on Memory, Remote Scan, Direct Print
Key 2	Copy, Send/Fax *4, Scan to Send *4, FAX *4, E-mail *4, I-Fax *4, File Server *4, Send Log, Address Book *4, Favorites *4, One-touch *4, Scan to Store, Store on Memory *, Remote Scan, Direct Print
Brightness Adjustment	1 (Darker) to 5* (Brighter)
Reverse Color Display	OFF* /ON
Auto Clear Settings	Selected Function *, Initial Function
Printer Density Selection	-4 to +4 0*
Inch Entry	OFF*/ON (USA: ON*)
Auto Drawer Selection	
Copy	
Stack Bypass	OFF*/ON
Drawer 1	OFF/ON*
Drawer 2 *1	OFF/ON*
Printer	
Drawer 1	OFF/ON*
Drawer 2 *1	OFF/ON*
Receive *4 (Fax for fax-only machine)	
Stack Bypass	OFF*/ON
Drawer 1	OFF/ON*
Drawer 2 *1	OFF/ON*
Other	
Stack Bypass	OFF*/ON
Drawer 1	OFF/ON*
Drawer 2 *1	OFF/ON*
Sleep Mode Energy Use	Low *, High
Paper Feed Method Switch	
Stack Bypass	Speed Priority *, Print Side Priority
Drawer 1	Speed Priority *, Print Side Priority
Drawer 2 *1	Speed Priority *, Print Side Priority
Language Switch	OFF*/ON
(Language Switch)	(The list of available languages is displayed.) Japanese, English, French, German, Italian, Dutch, Spanish, Swedish, Portuguese, Norwegian, Danish, Finnish, Polish, Hungarian, Czech, Slovenian, Greek, Estonian, Chinese (Simplified), Chinese (Traditional), Korean, Russian, Slovakian, Rumanian, Croatian, Bulgarian, Turkish, Catalan (*: Depending on the destination)
Error when Feeder is Dirty	OFF/ON*
K-size/B-size Originals	Use 16K, Use B5 *
Initialize Common Settings	Is it OK to initialize? No Yes

1.2.3.8 Common Settings

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

*: default settings
*1: Only for the Color imageRUNNER C1030iF or C1030 with the optional Super G3 FAX Board attached.
*2: Only for the Color imageRUNNER C1030 with the optional Super G3 FAX Board not attached.

T-1-8

Common Settings		
Item		**Settings**
Initial Function Settings		
	Select Initial Function	Main Menu *, Copy, Send/Fax*1, Scan to Send*2, Scan to Store, Direct Print
	Set System Monitor to Def.	OFF*/ON
	Status Monitor Device	OFF*/ON
Register Custom Key		
	Key 1	Copy *, Send/Fax *1, Scan to Send *2, FAX *1, E-mail, I-Fax, File Server, Send Log, Address Book, Search LDAP Server, Favorites, One-touch, Scan to Store, Store on Memory, Remote Scan, Direct Print
	Key 2	Copy, Send/Fax *1, Scan to Send *2, FAX *1, E-mail, I-Fax, File Server, Send Log, Address Book, Search LDAP Server, Favorites, One-touch, Scan to Store, Store on Memory *, Remote Scan, Direct Print
Brightness Adjustment		1 (Darker) to 5* (Brighter)
Reverse Color Display		OFF* /ON
Auto Clear Settings		Selected Function *, Initial Function
Inch Entry		OFF/ON*
Auto Drawer Selection		
	Copy	
		Stack Bypass	OFF*/ON
		Drawer 1	OFF/ON*
		Drawer 2	OFF/ON*
	Printer	
		Stack Bypass	OFF*/ON
		Drawer 1	OFF/ON*
		Drawer 2	OFF/ON*
	Receive	
		Stack Bypass	OFF*/ON
		Drawer 1	OFF/ON*
		Drawer 2	OFF/ON*
	Other	
		Stack Bypass	OFF*/ON
		Drawer 1	OFF/ON*
		Drawer 2 *1	OFF/ON*
Sleep Mode Energy Use			Low *, High
Paper Feed Method Switch		
	Stack Bypass	Speed Priority *, Print Side Priority
	Drawer 1	Speed Priority *, Print Side Priority
	Drawer 2	Speed Priority *, Print Side Priority
Language Switch		OFF*/ON
Error when Feeder is Dirty		OFF/ON*
Initialize Common Settings		Is it OK to initialize? No Yes

1.2.3.9 Communications Settings *3

imageRUNNER C1022 / imageRUNNER C1022i

Common Settings
*: default settings
**: China only
*3: Only when the Super G3 FAX Board is attached.
*4: Only when the appropriate optional equipment is attached.

T-1-9

Communications Settings*3 > Common Settings	
Item	**Settings**
Send Function Settings	
Register Unit Name *4	Max. 24 characters
Data Compression Ratio	High Ratio, Normal *, Low Ratio
Retry Times	0 to 5 (3*)
Change Send Func. Mode	Register, Initialize
Color Mode Settings	B&W: TIFF * / PDF / PDF (OCR) *4 Color: JPEG / PDF / PDF (Compact) / PDF (OCR) *4 / PDF (Compact + OCR) *4
Divide Pages	OFF*/ON
Resolution Settings	100 x 100 dpi, 150 x 150 dpi, 200 x 100 dpi (normal), 200 x 200 dpi (Fine), 200 x 400 dpi (Super Fine), 300 x 300 dpi, 400 x 400 dpi (Ultra Fine), 600 x 600 dpi (*: 200 x 100 dpi (normal)(only for the FAX only machine), 200 x 200 dpi (Fine)(Others))
Density/Background Removal	-4 (Lighter) to +4 (Darker) 0*
Background	
OFF*	
Background Removal	
Background Fine Adjust.	
Yellow	0 to 8 6*
Red	0 to 8 6*
Green	0 to 8 6*
Blue	0 to 8 6*
Original Type	Text/Photo *, Text, Photo
Priority level	-4 (Text Priority) to +4 (Photo Priority) (0*)
2-sided Original Settings	Off *, Book Type Original, Calendar Type Original
TX Terminal ID *4	OFF/ON *
Printing Position	Inside, Outside *
Tel. Number Mark	FAX*/TEL
Color Send Gamma Value	Gamma 1.0, Gamma 1.4, Gamma 1.8 *, Gamma 2.2
Sharpness	-3 (Low) to +3 (High) 0*
PDF (Compact) Img. Quality	
Text/Photo, Photo Mode	Data Size Priority, Normal *, Image Quality Priority
Character Mode	Data Size Priority, Normal *, Image Quality Priority
PDF (OCR) Settings (AD) *4	OFF/ON*
Default Screen for Send	Favorites, One-touch, Default Screen *
Initialize TX Settings	Is it OK to initialize? No Yes
RX Settings *4	
2-Sided Print	OFF*/ON
Receive Reduction	OFF/ON*
RX Reduction	Auto *, Fixed Reduction
Reduce %	97/95/90*/75 (%)
Reduce Direction	Vertical and Horizontal, Vertical Only *
Received Page Footer	OFF*/ON
Use K paper **	OFF*/ON
Toner Out Continuous Print	OFF/ON*
YCbCr Receive Gamma Val.	Gamma 1.0, Gamma 1.4, Gamma 1.8 *, Gamma 2.2

Fax Settings
*: default settings
*3: Only when the Super G3 FAX Board is attached.
*4: only for Japan, China, KR
*5: except AUS
*6: except Singapore
*7: only U.S.A.
*8: only for AUS
*9: The maximum differs depending on the destination.

T-1-10

Communications Settings *3 > Fax Settings			
Item			**Settings**
User Settings			
	Register Unit Telephone #		Max. 20 characters
	Tel. Line Type Selection *5		-
		-	-
		Manual	120V, 230V: Push (Tone) * / dial (Pulse) 10 PPS / dial (Pulse) 20 PPS *4 100V: dial 20 PPS*4 * / dial 10 PPS / Push
	Offhook Alarm *2		OFF*/ON (This function is not available for the external telephone.)
TX Settings			
	ECM TX		OFF/ON*
	Set Pause Time		1 to 15 seconds (2*)
	Auto-redial		OFF/ON*
		Redial Times	100V: 1 to 15 (2*) 120V, 230V: 1 to 10 (2*)
		Redial Time (min.)	2 to 99 minutes (*: 5(China), 4(TW), 2(Others))
		TX Error Redial	OFF/ON*
	Check Tone Before Sending*6		OFF/ON (*: Depending on the destination)
RX Settings			
	ECM RX		OFF/ON*
	Reception mode Selection		
		Auto RX *	
		Fax/Tel Auto Switch	
			Ring Start Time: 4-30 seconds (*: 6(Japan, U.S.A., Canada), 8(Others))
			Fax / Tel Ring Time: 15-300 seconds (*: 15(Japan, U.S.A., Canada), 17(Others))
			Voice Response: OFF*/ON
			After Ring Action: Done / Receive *
		Manual RX	
		Answer Mode	
		DRPD:SELECT FAX *7	DOUBLE RING*./SHORT-SHORT-LONG/SHORT-LONG-SHORT/OTHER RING TYPE/NORMAL RING
		NET SWITCH *8	
	Incoming Ring		OFF*/ON
		Ring Times *9	1 to 99 times (*: 1(China), 2(Others))
	Remote RX		OFF*/ON
		Remote RX ID	00 to 99 25*
	Manual/Auto Switch		OFF*/ON
		Fax / Tel Ring Time	1 to 99 seconds (15*)
	RX Restriction		OFF*/ON

1.2.3.10 Communications Settings

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Common Settings
*: default settings
*1: Only for the Color imageRUNNER C1030iF or C1030 with the optional Super G3 FAX Board attached.

T-1-11

Communications Settings > Common Settings	
Item	**Settings**
TX Settings	
Register Unit Name	Max. 24 characters
Data Compression Ratio	High Ratio, Normal *, Low Ratio
Retry Times	0 to 5 (3*)
Change Send Func. Mode	Register, Initialize
TX Terminal ID	OFF/ON *
Printing Position	Inside, Outside *
Tel. Number Mark	FAX*/TEL
Color Send Gamma Value	Gamma 1.0, Gamma 1.4, Gamma 1.8 *, Gamma 2.2
Sharpness	-3 (Low) to +3 (High) 0*
PDF (Compact) Img. Quality	
Text/Photo, Photo Mode	Data Size Priority, Normal *, Image Quality Priority
Text Mode	Data Size Priority, Normal *, Image Quality Priority
PDF (OCR) Settings (AD)	OFF/ON*
Default Screen for Send	Favorites, One-touch, Default Screen *
Initialize TX Settings	Is it OK to initialize? No Yes
RX Settings	
2-Sided Print	OFF*/ON
Receive Reduction	OFF/ON*
RX Reduction	Auto *, Fixed Reduction
Reduce %	97/95/90*/75 (%)
Reduce Direction	Vertical and Horizontal, Vertical Only *
Received Page Footer	OFF*/ON
Toner Out Continuous Print	OFF*/ON
YCbCr Receive Gamma Val.	Gamma 1.0, Gamma 1.4, Gamma 1.8 *, Gamma 2.2

Fax Settings*1
*: default settings

T-1-12

Communications Settings > Fax Settings*1	
Item	**Settings**
User Settings	
Register Unit Telephone #	Max. 20 characters
Tel. Line Type Selection	
Manual	Pulse / Tone*
Offhook Alarm	OFF/ON* (This function is not available for the external telephone.)
TX Settings	
ECM TX	OFF/ON*
Set Pause Time	1 to 15 seconds (2*)
Auto-redial	OFF/ON*
Redial Times	1 to 10 Times (2*)
Redial Interval	2 to 99 minutes (2*)
TX Error Redial	Off/ All Pages/ Error and 1st Page
Check Tone Before Sending	OFF/ON*
RX Settings	
ECM RX	OFF/ON*
Reception mode Selection	Auto RX / Fax/Tel Auto Switch / Manual RX / Answer Mode / DRPD: Select Fax
Incoming Ring	OFF/ON*
Ring Times	1 to 99 times (2*)
Remote RX	OFF/ON*
Remote RX ID	00 to 99 (25*)
Manual/Auto Switch	OFF*/ON
Fax / Tel Ring Time	1 to 99 seconds (15*)
RX Restriction	OFF*/ON

1.2.3.11 Address Book Settings

imageRUNNER C1022 / imageRUNNER C1022i

*: default settings
*4: Only when the appropriate optional equipment is attached.

T-1-13

Address Book Settings			
Item			**Settings**
Register Address *4			
Register New			
Fax			
	Register Name		Max 16 characters
	Destination Registration		Max. 120 characters
	Option		
		ECM TX	OFF/ON*
		Sending Speed	33600bps*, 14400bps, 9600bps, 4800bps
		Long Distance	Domestic *, Long Distance 1, Long Distance 2, Long Distance 3
E-mail			
	Register Name		Max 16 characters
	Destination Registration		Max. 120 characters
I-Fax			
	Register Name		Max 16 characters
	Destination Registration		Max. 120 characters
File			
	Register Name		Max 24 characters
	Destination Registration		FTP *, Windows(SMB), Windows(SMB): Browse
	Host Name		Max. 120 characters
	Folder Name		Max. 120 characters
	User Name		Max. 24 characters
	Password		FTP: Max. 24 characters, SMB: Max. 14 characters
Group			
	Register Name		Max 16 characters
	Destination Registration		Max. 299 destinations Select Fax, E-Mail, I-Fax, RemoteFileSystem, JetSend, Box, LocalPrinter that have been registered in Address Book.
Edit/Erase			
	Dest. Details/Edit		(To display the address details/editing screen.)
	Erase Destination		Erase the highlight destination? No/Yes

T-1-14

Address Book Settings	
Item	**Settings**
Register One-touch *4	
(Select the number of available one-touch dial.)	
Fax	
Register Name	Max. 16 characters
Register One-Touch Name	Max. 12 characters
Destination Registration	Max. 120 characters
ECM TX	OFF/ON*
Sending Speed	33600bps *, 14400bps, 9600bps, 4800bps
Long Distance	Domestic *, Long Distance (1), Long Distance (2), Long Distance (3)
E-Mail	
Register Name	Max. 16 characters
Register One-Touch Name	Max. 12 characters
E-mail Address	Max. 120 characters
I-Fax	
Register Name	Max. 16 characters
Register One-Touch Name	Max. 12 characters
I-Fax Address	Max. 120 characters
File	
Register Name	Max. 16 characters
Register One-Touch Name	Max. 12 characters
Protocol	FTP *, Windows (SMB), Windows (SMB): Browse
Host Name	Max. 120 characters
Folder Name	Max. 120 characters
User Name	Max. 24 characters
Password	FTP: Max. 24 characters, SMB: Max. 14 characters
Group	
Register Name	Max. 16 characters
Register One-Touch Name	Max. 12 characters
Destination Registration	Max. 299 destinations Select Fax, E-Mail, I-Fax, RemoteFileSystem, JetSend, Box, LocalPrinter that have been registered in Address Book.
(Select the number of registered one-touch dial.)	
Details/Edit	(To display the address details/editing screen.)
Erase	Erase the highlight destination? No/Yes

1.2.3.12 Address Book Settings

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

*: default settings
*1: Only for the Color imageRUNNER C1030iF or C1030 with the optional Super G3 FAX Board attached.

T-1-15

Address Book Settings			
Item			**Settings**
Register Address			
Fax*1			
	Register Name		Max 16 characters
	Destination Registration		Max. 40 characters
		ECM TX	OFF/ON*
		Sending Speed	33600bps*, 14400bps, 9600bps, 4800bps
		Long Distance	Domestic *, Long Distance 1, Long Distance 2, Long Distance 3
E-mail			
	Register Name		Max 16 characters
	Destination Registration		Max. 120 characters
I-Fax			
	Register Name		Max 16 characters
	Destination Registration		Max. 120 characters
File			
	Register Name		Max 16 characters
	Destination Registration		FTP *, Windows(SMB), Windows(SMB): Browse
	Host Name		FTP: Max. 47 characters Windows (SMB): Max. 120 characters
	Folder Name		Max. 120 characters
	User Name		Max. 24 characters
	Password		FTP: Max. 24 characters, Windows(SMB): Max. 14 characters
Group			
	Register Name		Max 16 characters
	Destination Registration		Max. 299 destinations
Search LDAP Server			
	Display Name	Max. 16 characters	
	Display Destination	When a fax number is selected from the search results: Max. 40 characters When an e-mail address is selected from the search results: Max. 120 characters	
	ECM TX*1	Off/On*	
	Sending Speed*1	33600bps, 14400bps, 9600bps, 4800bps	
	Long Distance*1	Domestic, Long Distance (1), Long Distance (2), Long Distance (3)	

T-1-16

Address Book Settings			
Item			**Settings**
Register One-touch			
Fax*1			
	Register Name		Max. 16 characters
	Register One-Touch Name		Max. 12 characters
	Destination Registration		Max. 40 characters
		ECM TX	OFF/ON*
		Sending Speed	33600bps *, 14400bps, 9600bps, 4800bps
		Long Distance	Domestic *, Long Distance (1), Long Distance (2), Long Distance (3)
E-Mail			
	Register Name		Max. 16 characters
	Register One-Touch Name		Max. 12 characters
	E-mail Address		Max. 120 characters
I-Fax			
	Register Name		Max. 16 characters
	Register One-Touch Name		Max. 12 characters
	I-Fax Address		Max. 120 characters
File			
	Register Name		Max. 16 characters
	Register One-Touch Name		Max. 12 characters
	Protocol		FTP *, Windows (SMB), Windows (SMB): Browse
		Host Name	FTP: Max. 47 characters Windows (SMB): Max. 120 characters
		Folder Name	Max. 120 characters
		User Name	Max. 24 characters
		Password	FTP: Max. 24 characters, Windows (SMB): Max. 14 characters
Group			
	Register Name		Max. 16 characters
	Register One-Touch Name		Max. 12 characters
	Destination Registration		Max. 299 destinations
Search LDAP Server			
	Display Name		Max. 16 characters
	Display Destination		When a fax number is selected from the search results: Max. 40 characters When an e-mail address is selected from the search results: Max. 120 characters
	ECM TX*1		Off/On*
	Sending Speed		33600bps, 14400bps, 9600bps, 4800bps
	Long Distance		Domestic, Long Distance (1), Long Distance (2), Long Distance (3)

1.2.3.13 Printer Settings

imageRUNNER C1022 / imageRUNNER C1022i

*: default settings
*2: Only when the PCL Printer Kit is attached.
*3: Only when the Barcode Printing Kit is attached.

T-1-17

Printer Settings			
Item			**Settings**
Number of Copies			1 to 999 Copies 1*
2-Sided			1-Sided *, 2-Sided
Paper Feed			
	Default Paper Size		LTR, LGL, STMT, EXEC, FLSC, OFI, B-OFI, M-OFI, G-LTR, G-LGL, COM10, Monarch, DL, ISO-c5, ISO-B5, A4, A5, B5 (*: A4(For all excluding USA, Canada), LTR(Only for USA, Canada))
	Default Paper Type		Plain *, Plain H, Recycled Paper, Color, Heavy 1, Heavy 2, Transparencies, Labels, Rough, Envelope
Printing Quality			
	Gradation level		High Gradation 1 *, High Gradation 2
	Toner Density		
		Cyan (C)	-8 (Lighter) to +8 (Darker) (0*)
		Magenta (M)	-8 (Lighter) to +8 (Darker) (0*)
		Yellow (Y)	-8 (Lighter) to +8 (Darker) (0*)
		Black (Bk)	-8 (Lighter) to +8 (Darker) (0*)
	Save Toner		OFF*/ON
	Line Control		Resolution Priority *, Gradation Priority
Layout			
	Margin Direction		Long Edge *, Short Edge
	Unit of Measure		Millimeter, Inch (*: Millimeter (For all excluding USA, Canada), Inch(Only for USA, Canada))
	Margin		mm: -50.0 to +50.0 mm Width 0.5 mm (0.0) in: -1.97 to +1.97 inch Width 0.01 inch (0.00)
Auto Error Skip			OFF*/ON
Collate			OFF*/ON
Timeout			OFF/Timeout (5 to 300 Seconds) 15*
Color Mode			Auto Switch *, Color, Black and White
Gradation Settings			
	Gradation		OFF*/Smooth 1/Smooth 2
	Graphics		OFF/ON*
	Image		OFF/ON*
Compressed Image Output			Output *, Display Error Message
Initialize Printer Settings			Initialize settings? (No, Yes)

T-1-18

Printer Settings		
Item		**Settings**
PCL Settings*2		
Paper Save		OFF* / ON
Orientation		Portrait *, Landscape
Font Number		(0 to 91) 0*
Character Size		4.00 to 999.75 point Width 0.25 point (12*) point (4.00 to 999.75) 12.00* Width 0.25point
No. of Characters		0.44 to 99.99 cpi Width 0.01 cpi (10*)
Rows		5 to 128 Lines (*: 60(U.S.A, Canada), 64(Others))
Character Code		DESKTOP / ISO4 / ISO6 / ISO11 / ISO15 / ISO17 / ISO21 / ISO60 / ISO69 / ISOL1 / ISOL2 / ISOL5 / ISOL6 / ISOL9 / Legal / MATH8 / MCTEXT / MSPUBL / PC775 / PC8 * / PC850 / PC852 / PC858 / PC8DN / PC8TK / PC1004 / PIFONT / PSMATH / PSTEXT / ROMAN8 / Roman 9 / VNINTL / VNMATH / VNUS / WIN30 / WINBALTWINL1 / WINL2 / WINL5
User Paper Size Settings		OFF* / ON
Unit		Millimeter, Inch (*: Millimeter (For all excluding USA, Canada), Inch(Only for USA, Canada))
Width		76.2 to 215.9 mm Width 0.1 mm 3.00 to 8.50 inch Width 0.01 inch
Height		127.0 to 355.6 mm Width 0.1 mm 5.00 to 14.00 inch Width 0.01 inch
Append CR to LF		Yes / No*
A4 Print Area Enlargement		OFF* / ON
Halftones		OFF* / ON
	Text	Resolution *, Gradation
	Graphics	Resolution, Gradation *
	Image	Resolution, Gradation *
RGB Source Profile		
	Text	sRGB* / Gamma 1.5 / Gamma 1.8 / Gamma 2.4
	Graphics	sRGB* / Gamma 1.5 / Gamma 1.8 / Gamma 2.4
	Image	sRGB* / Gamma 1.5 / Gamma 1.8 / Gamma 2.4
Output Profile		
	Text	Normal* / Photo
	Graphics	Normal* / Photo
	Image	Normal / Photo*
Matching Method		
	Text	Perceptual, Saturation *, Colorimetric
	Graphics	Perceptual *, Saturation, Colorimetric
	Image	Perceptual *, Saturation, Colorimetric
Gray Compensation		
	Text	OFF / ON*
	Graphics	OFF / ON*
	Image	OFF / ON*
CMS (Matching) Selection		Printer *, Host
CMS (Matching) Gamma		
	Text	Gamma / CMS*
	Graphics	Gamma / CMS*
	Image	Gamma / CMS*
Gamma Correction		
	Text	1.0 / 1.4* / 1.8 / 2.2
	Graphics	1.0 / 1.4* / 1.8 / 2.2
	Image	1.0 / 1.4* / 1.8 / 2.2
Advanced Smoothing		
	Advanced Smoothing	OFF / Smooth 1* / Smooth 2
	Graphics	OFF* / ON
	Text	OFF / ON*
BarDIMM *3		Invalid *, Valid
FreeScape		OFF ~ " # $ / \ ? { } |

1.2.3.14 Printer Settings

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

*: default settings
*1: Only for the Color imageRUNNER C1030iF or C1030 with the optional PCL Printer Kit or PS Printer Kit attached.
*2: Only for the machine with both PCL and PS printing functions activated.
*3:Only for the Color imageRUNNER C1030iF or C1030 with the optional PCL Printer Kit attached.
*4: Only for the machine with the optional PS Printer Kit attached.

T-1-19

Printer Settings	
Item	**Settings**
Number of Copies	1 to 999 Copies 1*
2-Sided	1-Sided *, 2-Sided
Paper Feed	
Default Paper Size	LTR, LGL, STMT, EXEC, FLSC, OFI, B-OFI, M-OFI, G-LTR, G-LGL, COM10, Monarch, DL, ISO-C5, ISO-B5, A4, A5, B5
Default Paper Type	Plain 1, Plain 2*, Recycled Paper, Color, Bond, Heavy 1, Heavy 2, Transparencies, Labels, Envelope
Paper Size Override	OFF*/ON
Printing Quality	
Gradation level	High Gradation 1 *, High Gradation 2
Toner Density	
Cyan (C)	-8(Lighter) to +8(Darker)(0*)
Magenta (M)	-8(Lighter) to +8(Darker)(0*)
Yellow (Y)	-8(Lighter) to +8(Darker)(0*)
Black (Bk)	-8(Lighter) to +8(Darker)(0*)
Save Toner *1	OFF*/ON
Line Control	Resolution Priority *, Gradation Priority
Layout	
Binding Location	Long Edge *, Short Edge
Unit of Measure	Millimeter/ Inch*
Margin	- 1.97 to +1.97 inch (0.00*) - 50.0 to +50.0 mm (0.0*)
Auto Continue	OFF*/ON
Collate	OFF*/ON
Timeout	OFF/Timeout (5 to 300 Seconds) 15*
Personality*2	Auto*/PS/PCL
Mode Priority*2	OFF*/PS/PCL
Auto Select*2	
PS	OFF/ON*
PCL	OFF/ON*
Color Mode	Auto Detect *, Color, Black and White
Gradation Settings	
Gradation	OFF*/Smooth 1/Smooth 2
Graphics	OFF/ON*
Image	OFF/ON*
Compressed Image Output	Output *, Display Error
Initialize Printer Settings	Initialize settings? (No, Yes)

T-1-20

Printer Settings	
Item	**Settings**
PCL Settings*3	

Printer Settings	
Item	**Settings**
Paper Save	OFF* / ON
Orientation	Portrait *, Landscape
Font Number	(0 to 104) 0*
Point Size	4.00 to 999.75 point (12*)
Pitch	0.44 to 99.99 cpi (10*)
Form Lines	5 to 128 Lines (60*)
Symbol Set	ARABIC8, DESKTOP, GREEK8, HEBREW7, HEBREW8, ISO4, ISO6, ISO11, ISO15, ISO17, ISO21, ISO60, ISO69, ISOCYR, ISOGRK, ISOHEB, ISOL1, ISOL2, ISOL5, ISOL6, LEGAL, MATH8, MCTEXT, MSPUBL, PC775, PC8, PC850, PC851, PC852, PC862, PC864, PC866, PC8DN, PC8GRK, PC8TK, PC1004, PIFONT, PSMATH, PSTEXT, ROMAN8, VNINTL, VNMATH, VNUS, WIN30, WINARB, WINBALT, WINCYR, WINGRK, WINL1, WINL2, WINL5
Custom Paper Size Settings	OFF* / ON
Unit of Measure	Milimeter, Inch*
X dimension	3.00 to 8.50 inch (8.50) 76.2 to 216.0 mm (216.0)
Y dimension	5.00 to 14.00 inch (14.00) 127.0 to 356.0 mm (356.0)
Append CR to LF	Yes / No*
Enlarge A4 Print Width	OFF* / ON
Halftones	OFF* / ON
Text	Resolution *, Gradation
Graphics	Resolution, Gradation *
Image	Resolution, Gradation *
RGB Source Profile	
Text	sRGB* / Gamma 1.5 / Gamma 1.8 / Gamma 2.4
Graphics	sRGB* / Gamma 1.5 / Gamma 1.8 / Gamma 2.4
Image	sRGB* / Gamma 1.5 / Gamma 1.8 / Gamma 2.4
Output Profile	
Text	Normal* / Photo
Graphics	Normal* / Photo
Image	Normal / Photo*
Matching Method	
Text	Perceptual, Saturation *, Colorimetric
Graphics	Perceptual *, Saturation, Colorimetric
Image	Perceptual *, Saturation, Colorimetric
Gray Compensation	
Text	OFF / ON*
Graphics	OFF / ON*
Image	OFF / ON*
CMS (Matching) Selection	Printer *, Host
CMS (Matching) Gamma	
Text	Gamma / CMS*
Graphics	Gamma / CMS*
Image	Gamma / CMS*
Gamma Correction	
Text	1.0 / 1.4* / 1.8 / 2.2
Graphics	1.0 / 1.4* / 1.8 / 2.2
Image	1.0 / 1.4* / 1.8 / 2.2
Advanced Smoothing	
Advanced Smoothing	OFF / Smooth 1* / Smooth 2
Graphics	OFF* / ON
Text	OFF / ON*
BarDIMM	Disable / Enable*
FreeScape	OFF ~ " # $ / \ ? { } |
PS Settings*4	

Printer Settings	
Item	**Settings**
Job Timeout	0 to 3600 seconds (0)
Wait Timeout	0 to 3600 seconds (300)
Print PS Errors	OFF* / ON
RGB Source Profile	sRGB/Gamma 1.5/Gamma 1.8/Gamma 2.4
CMYK Simulation Profile	US Web Ctd(Canon)/Euro Standard
Use Grayscale Profile	OFF* / ON
Output Profile	Normal/ Photo/ TR Normal/ TR Photo
Matching Method	Perceptual/ Saturation/ Colorimetric
RGB Pure Black Process	OFF / ON*
CMYK Pure Blk Process	OFF / ON*
Pure Black Text	OFF / ON*
Halftones	
Error Diffusion	OFF* / ON
Text	Resolution/ Gradation
Graphics	Resolution/ Gradation
Image	Resolution/ Gradation
Advanced Smoothing	
Advanced Smoothing	Off/ Smooth 1/ Smooth 2
Graphics	OFF* / ON
Text	OFF / ON*
Toner Vol. Adjustment	Normal/ Gradation

1.2.3.15 Timer Settings

imageRUNNER C1022 / imageRUNNER C1022i

***: For all excluding Japan, Asia
The following are the items for timer settings.
1. Month
2. Week (1st/2nd/3rd/4th/End)
3. Day of week
4. Time(00 - 23): No setting by minutes

Default: No setting

T-1-21

Timer Settings		
Item		**Settings**
Date/Time Settings		
	Current Time Settings	YYYY MM / DD --:--
	Time Zone Settings	1. GMT-12:00 2. GMT-11:00 3. GMT-10:00 4. GMT-9:00 5. GMT-8:00 6. GMT-7:00 7. GMT-6:00 8. GMT-5:00: Default for North America (EST) 9. GMT-4:00 10. GMT-3:30 11. GMT-3:00 12. GMT-2:00 13. GMT-1:00 14. GMT: Default for Europe/general 15. GMT+1:00 16. GMT+2:00 17. GMT+3:00 18. GMT+3:30 19. GMT+4:00 20. GMT+4:30 21. GMT+5:00 22. GMT+5:30 23. GMT+6:00 24. GMT+7:00 25. GMT+8:00 26. GMT+9:00: Default for Japan 27. GMT+9:30 28. GMT+10:00 29. GMT+11:00 30. GMT+12:00
Daylight Saving Time Set. ***		OFF*/ON
	Start date	
	Month	
	Week	
	Day of week	
	Time	
	End date	
	Month	
	Week	
	Day of week	
	Time	
Auto Sleep Time		ON/OFF
	Shift time	3 to 240 Minutes 15*
Auto Clear Time		0 = Off, 1 to 9 Minutes (by minutes) 2*

1.2.3.16 Timer Settings

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

*1: We recommend that you use this option in the default setting.

T-1-22

Timer Settings	
Item	**Settings**
Date/Time Settings	
Current Time Settings	MM / DD / YYYY
Time Zone Settings	GMT-12:00 to GMT+12:00 (GMT-5:00)
Daylight Saving Time Set.	OFF*/ON
Auto Sleep Time *1	ON/OFF
Shift time	3 to 240 Minutes 15*
Auto Clear Time	0 = Off, 1 to 9 Minutes 2*

1.2.3.17 Adjustment/Cleaning

imageRUNNER C1022 / imageRUNNER C1022i

*: default settings
*1: default: not displayed(IR C1022i / IR C1021I / iRC 1021i / IRC 1022 / iRC 1021 for North America, Europe, and Australia), displayed(Others)

T-1-23

Adjustment/Cleaning	
Item	**Settings**
Auto Gradation Correction	Full Correction (Test Print 1->Start reading x 3 times) Quick Correction (No test print-> Start) Copy Image Collection
Feeder Dirty Auto Correct.	OFF/ON*
First Calibration	OFF*/ON
ACS Function Adjustment *1	
Feeder	-3 (Color Priority) to +3 (B&W Priority) 0*
Platen Glass	-3 (Color Priority) to +3 (B&W Priority) 0*
Color Black Char. Process.	
Feeder	-3 (Color Priority) to +3 (B&W Priority) 0*
Platen Glass	-3 (Color Priority) to +3 (B&W Priority) 0*
Image Special Processing	OFF*/Level 1/Level 2
Paper Length Confirmation	OFF/ON*
Special Mode P	OFF*/ON
Fixing Unit Cleaning	Start Cleaning
Feeder Cleaning	Start

1.2.3.18 Adjustment/Cleaning

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

*: default settings

T-1-24

Adjustment/Cleaning	
Item	**Settings**
Auto Gradation Correction	Full Correction (Test Print 1) Quick Correction (Start) Copy Image Correction (Test Print 1)
Feeder Dirty Auto Correct.	OFF/ON*
First Calibration	OFF*/ON
Color Black Char. Process.	
Feeder	-3 (Color Priority) to +3 (B&W Priority) 0*
Platen Glass	-3 (Color Priority) to +3 (B&W Priority) 0*
Image Special Processing	OFF*/Level 1/Level 2
Paper Length Confirmation	OFF/ON*
Special Mode P	OFF*/ON
Fixing Unit Cleaning	Start Cleaning
Feeder Cleaning	Start

1.2.3.19 Report Settings

imageRUNNER C1022 / imageRUNNER C1022i

*: default settings
*4: Only when the appropriate optional equipment is attached.

Settings

T-1-25

Report Settings > Settings	
Item	**Settings**
TX Report	OFF/ON/Only When Error Occurs *
Display Send Original	OFF/ON*
Color Send Original Display *4	OFF/ON*
Activity Report	
Auto Print	OFF/ON*
Send/ Receive Separate *4	OFF*/ON
RX Report *4	OFF*/ON/Only When Error Occurs

Print List

T-1-26

Report Settings > Print List		
Item		**Settings**
Address Book List *4		
	Address Book	Do you want to print the address book list? No/Yes
	One-touch	Do you want to print the address book list? No/Yes
User’s Data List		Is it OK to print the user's data list? No/Yes

1.2.3.20 Report Settings

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

*: default settings
*1: Only for the Color imageRUNNER C1030iF or C1030 with the optional Super G3 FAX Board attached.

Settings

T-1-27

Report Settings > Settings	
Item	**Settings**
TX Report	OFF/ON/Only When Error Occurs *
Display Send Original	OFF/ON*
Color Send Original Display	OFF*/ON
Activity Report	
Auto Print	OFF/ON*
Send/ Receive Separate	OFF*/ON
Daily Activity Rep. Time	OFF*/ON
RX Report	OFF*/ON /Only When Error Occurs
Fax Activity Report *1	
Auto Print	OFF/ON*
Send/Receive Separate	OFF*/ON
Daily Activity Rep. Time	OFF*/ON

Print List

T-1-28

Report Settings > Print List	
Item	**Settings**
Address Book List	
Address Book	Do you want to print the address book list? No/Yes
One-touch	Do you want to print the address book list? No/Yes
User's Data List	Is it OK to print the user's data list? No/Yes

1.2.3.21 System Management Set.

imageRUNNER C1022 / imageRUNNER C1022i

*: default settings
*4: Only when the appropriate optional equipment is attached.

System Manager Info. Set.

T-1-29

System Management Set. > System Manager Info. Set.	
Item	**Settings**
System Mgmt. Dept. ID	Max 7 digits
System Mgmt. Password	Max 7 digits
System Manager Name	Max 32 characters

Device Info. Settings

T-1-30

System Management Set. > Device Info. Settings	
Item	**Settings**
Device Name	Max 32 characters (Model name is displayed as default.)
Location Information	Max 32 characters

Dept. ID Management

T-1-31

System Management Set. > Dept. ID Management	
Item	**Settings**
(Dept. ID Management)	OFF*/ON
Register ID/Password	
Dept. ID	Max. 7 characters
Password	Max. 7 characters
Limit On/Off & Page Limit	
Total Prints	ON/OFF*
Page Limit	0*-999999
Total Color Print	ON/OFF*
Page Limit	0*-999999
Total Black	ON/OFF*
Page Limit	0*-999999
Color Copy	ON/OFF*
Page Limit	0*-999999
Color Scan	ON/OFF*
Page Limit	0*-999999
Color Print	ON/OFF*
Page Limit	0*-999999
Black Copy	ON/OFF*
Page Limit	0*-999999
Black Scan	ON/OFF*
Page Limit	0*-999999
Black Print	ON/OFF*
Page Limit	0*-999999
Page Totals	Total Prints, Total Color Print, Total Black Prints, Color Copy, Color Scan, Color Print, Black Copy, Black Scan, Black Print
Select Dept. ID to Edit	(Dept. ID list)
Page Total	0-999999
Clear	Clear count? No / Yes
Menu	
Print List	All, Total Print Only, Color Only, Black Only
All Clear	Clear all of the count? No / Yes
Allow Unknown ID Printing	OFF/*ON (Availability of legacy print as print with default ID is displayed. Legacy print is rejected by setting OFF.)
Allow Unknown ID R. Scan	OFF*/ON
Allow Unknown Black Copy	OFF*/ON

User ID Management

T-1-32

System Management Set. > User ID Management	
Item	**Settings**
(User ID Management)	OFF*/ON

Card ID Management

T-1-33

System Management Set. > Card ID Management			
Item			**Settings**
Register ID/Password			
	Dept. ID		Max. 8 characters
	Password		Max. 7 characters
	Limit On/Off & Page Limit		
		Total Prints	ON/OFF*
		Page Limit	0*-999999
		Total Color Print	ON/OFF*
		Page Limit	0*-999999
		Total Black	ON/OFF*
		Page Limit	0*-999999
		Color Copy	ON/OFF*
		Page Limit	0*-999999
		Color Scan	ON/OFF*
		Page Limit	0*-999999
		Color Print	ON/OFF*
		Page Limit	0*-999999
		Black Copy	ON/OFF*
		Page Limit	0*-999999
		Black Scan	ON/OFF*
		Page Limit	0*-999999
		Black Print	ON/OFF*
		Page Limit	0*-999999
Page Totals			Total Prints, Total Color Print, Total Black Prints, Color Copy, Color Scan, Color Print, Black Copy, Black Scan, Black Print
	Select Dept. ID to Edit		(Dept. ID list)
		Page Total	0-999999
		Clear	Clear count? No / Yes
	Menu		
		Print List	All, Total Print Only, Color Only, Black Only
		All Clear	Clear all of the count? No / Yes

Network Settings

T-1-34

System Management Set. > Network Settings	
Item	**Settings**
TCP/IP Settings	
IPv4 Settings	
IP Address Settings	
Manual Settings	OFF/ON*
IP Address	IP Address (0.0.0.0*)
Subnet Mask	IP Address (0.0.0.0*)
Gateway Address	IP Address (0.0.0.0*)
Obtain Automatically	OFF*/ON
DHCP	OFF*/ON
BOOTP	OFF*/ON
RARP	OFF*/ON
Confirm Set.	
IP Address	IP Address (0.0.0.0*)
Subnet Mask	IP Address (0.0.0.0*)
Gateway Address	IP Address (0.0.0.0*)
PING Command	IP Address
IP Address Range Settings	OFF*/ON
Register	Max. 10 IPv4 Addresses
Single Address	IP Address
Multiple Destinations	First Address - Last Address
Edit / Confirm	Max. 10 IPv4 Addresses
Reject / Permit	Reject */ Permit
Edit	IP Address (Switch Single Address / Multiple Destinations)
Erase	Is it OK to erase? No / Yes
DNS Settings	
DNS Server Address	
Primary DNS Server	IP Address (0.0.0.0*)
Secondary DN Server	IP Address (0.0.0.0*)
DNS Host/Domain Name	
Host Name	Max. 47 characters (*: Canon****** (“******”represents the last six digits of a MAC address))
Domain Name	Max. 47 characters
DNS Dynamic Update Settings	OFF*/ON

T-1-35

System Management Set. > Network Settings	
Item	**Settings**
TCP/IP Settings	
IPv6 Settings	
Use IPv6	OFF*/ON
Conf. Address	(Link-Local Address is displayed)
Stateless Address Settings	OFF/ON*
Conf. Address	(Stateless Address and Prefix Length are displayed) (Max. 6 IPv6 Addresses)
Manual Address Settings	
Use Manual Address	OFF*/ON
Manual Address	IP Address
Prefix Length	0 to 128 *64
Default Router Address	IP Address
Use DHCPv6	OFF*/ON
Conf. Address	(Stateful Address and Prefix Length are displayed)
PING Command	
PING Command	IP Address
Host Name	Max. 47 characters
IP Address Range Settings	OFF*/ON
Register	(Max. 10 IPv6 Addresses)
Single Address	IP Address
Multiple Destinations	First Address - Last Address
Prefix Address	IPv6 Prefix
Edit / Confirm	(Max. 10 IPv6 Addresses)
Reject / Permit	Reject */ Permit
Edit	IP Address (Switch Single Address / Multiple Destinations)
Erase	Is it OK to erase? No / Yes
DNS Settings	
DNS Server Settings	
Primary DNS Server	IP Address
Secondary DNS Server	IP Address
DNS Host/Domain Name	
Use Same Host Name/Domain Name as IPv4	OFF*/ON
Host Name	Max. 47 characters (*: Canon****** (“******”represents the last six digits of a MAC address))
Domain Name	Max. 47 characters
DNS Dynamic Update Set.	
Use DNS Dynamic Update	OFF*/ON
Manual Address Regist.	OFF*/ON
Register Stateful Address	OFF*/ON

T-1-36

System Management Set. > Network Settings	
Item	**Settings**
TCP/IP Settings	
WINS Configuration *4	
WINS Resolution	OFF*/ON
WINS Server Address	IP Address (Only when WINS resolution is implemented) (0.0.0.0) *
LPD Print Settings	OFF/ON*
RAW Print Settings	OFF/ON*
Use Bidirectional	OFF*/ON
WSD Print Settings	
Use WSD Print	OFF/ON*
Use WSD Browsing	OFF/ON*
Use Multicast Discovery	OFF/ON*
Use PASV Mode for FTP *4	OFF*/ON
FTP Extension *4	OFF*/ON
Use HTTP	OFF/ON*
Port Number Settings	
LPD	0 to 65535 (515*)
RAW	0 to 65535 (9100*)
HTTP	0 to 65535 (80*)
SMTP Receive *4	0 to 65535 (25*)
POP3 Receive *4	0 to 65535 (110*)
FTP Sending *4	0 to 65535 (21*)
SMTP Send *4	0 to 65535 (25*)
SNMP	0 to 65535 (161*)
Proxy Settings	
Use Proxy	OFF*/ON
HTTP Proxy Server Address	IP Address or Max. 128 characters (+NULL)
HTTP Proxy Server Port Number	1 to 65535 80*
Use Proxy within the Same Domain	OFF*/ON
Use Proxy Authentication	OFF*/ON
User Name	Max. 24 characters
Password	Max. 24 characters
Receive MAC Address Set.	
MAC Address Permit RX Valid	OFF*/ON
Register	MAC Address (Max. 12 characters) (Max 10 addresses)
Edit / Confirm	
List of permitted address	
Edit	MAC Address (Max. 12 characters)
Erase	Is it OK to erase? No / Yes
SMB Settings *4	
Use SMB Client	OFF*/ON
Server Name	Max. 15 characters (NetBIOS name for the machine)
Workgroup Name	Max. 15 characters (Workgroup name assigned)
Comment	48byte
Use LM Announce	OFF*/ON
SNMP Settings	
Use SNMP	OFF/ON*
Community Name 1	Max. 15 characters (+NULL) (Public*)
Community Name 2	Max. 15 characters (+NULL)
Writable SNMP 1	OFF/ON*
Writable SNMP 2	OFF*/ON
Printer Mgt. Info from Host	OFF/ON*
Dedicated Port Settings	OFF/ON*
Startup Time Settings	0 to 300 Seconds 0*
Ethernet Driver Settings	
Auto Detection	OFF/ON*
(OFF)	
Communication Mode	Half Duplex *, Full Duplex
Ethernet Type	10 Base-T*/100 Base-TX
MAC Address	(Display only)

T-1-37

System Management Set. > Network Settings			
Item			Settings
E-mail/I-Fax *4			
	SMTP Receive		OFF */ON
	POP		OFF */ON
	SMTP Sever		Name of superior server of E mail, I-Fax Max 48 characters Enter IP address in the case that a DNS server is not provided. In the case that an IP address for the DNS server is registered, enter a name that the DNS server can understand. Ex.: mail_server.ccm.canon.co.jp
	E-mail Address		Account for sending E mail, I-Fax Max 64 characters Ex.: account@a01.ccm.canon.co.jp
	POP Server		POP server name for receiving I-Fax using POP Max 48 characters Enter IP address in the case that a DNS server is not provided. In the case that an IP address for the DNS server is registered, enter a name that the DNS server can understand.
	POP Address		Account for receiving I-Fax using POP Max 32 characters
	POP Password		Password for receiving I-Fax using POP Max 32 characters
	POP Interval		0 to 99 Minutes (Transmission with POP is not implemented when 0 is set.) *0
	Authentication / Encryption		
		POP Auth. Before Send	OFF*/ON
		SMTP Authentication	OFF*/ON
			User Name: Max 64 characters (Can be set when SMTP authentication is ON)
			Password: Max 32 characters (Can be set when SMTP authentication is ON)

Communication Settings *4

T-1-38

System Management Set. > Communication Settings *4			
Item			Settings
E-mail/I-Fax Settings			
	Send Data Size Limit		0 to 99MB, in 1MB unit (3MB*)
	Divide TX Data Oversize.		OFF*/ON
	Default Subject		Max 40 characters (Attached Image*)
Fax Settings			
	Send Start Speed		33600*/14400/9600/7200/4800/2400 bps
	Receive Start Speed		33600*/14400/9600/7200/4800/2400 bps
	R-key Setting		PSTN */ PBX Switch method: PREFIX(prefix code), HOOKING
Memory Lock Settings			
	Use Memory Lock		OFF*/ON
	Memory Lock Password		Max. 7 digits
	Report Print		OFF*/ON
	Memory Lock Time Settings		Do not Specify *, Specify
		Memory Lock Start Settings	Time setting
		Memory Lock End Settings	Time setting

Forwarding Settings *4

T-1-39

System Management Set. > Forwarding Settings *4	
Item	**Settings**
Forwarding Condition Setting	All, Fax, I-Fax *4
Switch Forwarding On / Off	OFF*/ON
Register	
Fowarding Cond. Name	Max. 50 characters
Forwarding Condition Setting	Fax *, I-Fax
Forwarding Condition	-
(Condition is set to Fax)	Destination: Pull-down (disregard *, Does Not Exist, equals, differs from, begins with, ends with, contains, does not contain) Max 20 bytes. Available characters are 0 to 9 (0x30 to 0x39), +(0x2B) , space (0x20)
(Condition is set to I-Fax)	Destination: Pull-down (disregard *, Does Not Exist, equals, differs from, begins with, ends with, contains, does not contain) Max. 120 characters
	Sender: Pull-down (disregard *, Does Not Exist, equals, differs from, begins with, ends with, contains, does not contain) Max. 120 characters
	Subject: Pull-down (disregard *, Does Not Exist, equals, differs from, begins with, ends with, contains, does not contain) Max. 120 characters
Forwarding destination	-
File Format	When <Fax> is selected in <Forwarding Conditions Settings>: TIFF *, PDF When <I-Fax> is selected in <Forwarding Conditions Settings>: TIFF(Black)/PDF(Color) *, TIFF(Black)/JEG(Color), PDF, PDF(Black)/JPEG(Color)
Divide Pages	OFF*/ON
Forward w/o Condition	Fax *, I-Fax
Forwarding Destination	Select from the list of registered addresses
File Format	When <Fax> is selected in <Forwarding Conditions Settings>: TIFF *, PDF When <I-Fax> is selected in <Forwarding Conditions Settings>: TIFF(Black)/PDF(Color) *, TIFF(Black)/JEG(Color), PDF, PDF(Black)/JPEG(Color)
Divide Pages	OFF*/ON
Erase	Is it OK to erase? No / Yes
Print List	Do you want to print the forwarding conditions list? No / Yes
Details / Edit	-

Forwarding Error Settings *4

T-1-40

System Management Set. > Forwarding Error Settings *4	
Item	**Settings**
Print Image	OFF/ON*
Store Image in Memory	OFF*/ON

Remote UI

T-1-41

System Management Set. > Remote UI	
Item	**Settings**
(Remote UI)	OFF/ON*

Restrict the Send Function *4

T-1-42

System Management Set. > Send Function Restriction *4	
Item	**Settings**
Address Book Password	7 digits
Limit New Destinations	OFF*/ON
Permit TX from Fax Driver	OFF/ON*
Restrict Recall	OFF*/ON
Confirm Entered Fax No.	OFF*/ON
Restrict Seq. Broadcast	Off *, Broadcast Confirmation, Prohibit Broadcast

Auto Online/Offline

T-1-43

System Management Set. > Auto Online/Offline	
Item	**Settings**
Auto Online	OFF*/ON
Auto Offline	OFF*/ON

Job Log Display

T-1-44

System Management Set. > Job Log Display	
Item	**Settings**
(Job Log Display)	OFF/ON*

Memory Media Store Log

T-1-45

System Management Set. > Memory Media Store Log	
Item	**Settings**
(Memory Media Store Log)	Do Not Retain *, Retain

Register License

T-1-46

System Management Set. > Register License	
Item	**Settings**
(Register License)	Start, Backspace (Enter license key with the numeric pad and press the OK key.: OK)

Use USB Device

T-1-47

System Management Set. > Use USB Device	
Item	**Settings**
(Use USB Device)	OFF/ON*

Dept. ID/User Name Display

T-1-48

System Management Set. > Dept. ID/User Name Display	
Item	**Settings**
(Dept. ID/User Name Display)	OFF*/ON

Page Description Lan.(PnP)

T-1-49

System Management Set. > Page Description Lan.(PnP)	
Item	**Settings**
(Page Description Lan.(PnP))	LIPS LX, PCL5c, PCL6, FAX, LIPS LX (XPS)

Update Firmware

T-1-50

System Management Set. > Update Firmware	
Item	**Settings**
(Update Firmware)	OFF*/ON

Setup Guide Start

T-1-51

System Management Set. > Setup Guide Start	
Item	**Settings**
(Setup Guide Start)	Start the startup guide? No, Yes

1.2.3.22 System Management Settings

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

*: default settings
*1: Only for the Color imageRUNNER C1030iF or C1030 with the optional Super G3 FAX Board attached.
*2: Only when Authentication at Send is activated.

System Manager Info. Setting

T-1-52

System Management Set. > System Manager Info. Setting	
Item	**Settings**
System Mgmt. Dept. ID	Max 7 digits (7654321*)
System Mgmt. Password	Max 7 digits (7654321*)
System Manager Name	Max 32 characters

Device Info. Settings

T-1-53

System Management Set. > Device Info. Settings	
Item	**Settings**
Device Name	Max 32 characters
Location Information	Max 32 characters

Dept. ID Management

T-1-54

System Management Set. > Dept. ID Management	
Item	**Settings**
(Dept. ID Management)	OFF*/ON
Register Dept. ID/Pass.	
Register	
Dept. ID	Max. 7 characters
Password	Max. 7 characters
Limit On/Off & Page Limit	
Total Prints	ON/OFF*
Page Limit	0*-999999
Total Color Print	ON/OFF*
Page Limit	0*-999999
Total Black	ON/OFF*
Page Limit	0*-999999
Color Copy	ON/OFF*
Page Limit	0*-999999
Color Scan	ON/OFF*
Page Limit	0*-999999
Color Print	ON/OFF*
Page Limit	0*-999999
Black Copy	ON/OFF*
Page Limit	0*-999999
Black Scan	ON/OFF*
Page Limit	0*-999999
Black Print	ON/OFF*
Page Limit	0*-999999
Page Totals	Total Prints, Total Color Print, Total Black Prints, Color Copy, Color Scan, Color Print, Black Copy, Black Scan, Black Print
Print List	All, Total Print Only, Color Only, Black Only
All Clear	Clear all of the count? No / Yes
Allow Unknown ID Printing	OFF/*ON
Allow Unknown ID R. Scan	OFF*/ON
Allow Black Copy Jobs	OFF*/ON

User ID Management

T-1-55

System Management Set. > User ID Management	
Item	**Settings**
(User ID Management)	OFF*/ON

Network Settings

T-1-56

System Management Set. > Network Settings	
Item	**Settings**
TCP/IP Settings	
IPv4 Settings	
IP Address Settings	
Manual Settings	OFF/ON*
IP Address	IP Address (0.0.0.0*)
Subnet Mask	IP Address (0.0.0.0*)
Gateway Address	IP Address (0.0.0.0*)
Obtain Automatically	DHCP / BOOTP / RARP
PING Command	IP Address (0.0.0.0*)
IP Address Range Settings	OFF*/ON
Register	
Single Address	IP Address (0.0.0.0*)
Multiple Destinations	Max. 10 IPv4 Addresses
DNS Settings	
DNS Server Settings	
Primary DNS Server	IP Address (0.0.0.0*)
Secondary DN Server	IP Address (0.0.0.0*)
DNS Host/Domain Name	
Host Name	Max. 47 characters (*: Canon****** ("******"represents the last six digits of a MAC address))
Domain Name	Max. 47 characters
DNS Dynamic Update Set	OFF*/ON

T-1-57

System Management Set. > Network Settings	
Item	**Settings**
TCP/IP Settings	
IPv6 Settings	
Use IPv6	OFF*/ON
Stateless Address Settings	OFF/ON*
Manual Address Settings	OFF*/ON
Manual Address	IP Address
Prefix Length	0 to 128 *64
Default Router Address	IP Address
Use DHCPv6	OFF*/ON
PING Command	
IPv6 address	IP Address
Host Name	Max. 47 characters
IP Address Range Settings	OFF*/ON
Register	
Single Address	IP Address
Multiple Destinations	Max. 10 IPv6 Addresses
Prefix Address	IP Address
DNS Settings	
DNS Server Settings	
Primary DNS Server	IP Address
Secondary DNS Server	IP Address
DNS Host/Domain Name	
Use Same Host /Domain as IPv4	OFF*/ON
Host Name	Max. 47 characters (*: Canon****** ("******"represents the last six digits of a MAC address))
Domain Name	Max. 47 characters
DNS Dynamic Update Set.	OFF*/ON
Manual Address Regist.	OFF*/ON
Register Stateful Address	OFF*/ON

T-1-58

System Management Set. > Network Settings	
Item	**Settings**
TCP/IP Settings	
WINS Configuration	OFF*/ON
WINS Server Address	IP Address (0.0.0.0) *
LPD Print Settings	OFF/ON*
RAW Print Settings	OFF/ON*
Use Bidirectional	OFF/ON*
WSD Print Settings	
Use WSD Print	OFF*/ON
Use WSD Browsing	OFF*/ON
Use Multicast Discovery	OFF*/ON
SNTP Settings	OFF*/ON
Polling Interval	1 to 48 hours (24)
NTP Server Address	Max. 47 characters
NTP Server Check	Start
Use PASV Mode for FTP	OFF*/ON
FTP Extension	OFF*/ON
Certificate Settings	
Key and Certificate List	
Certificate Details	Displays Version, Serial No., Signature Algorithm, Issue Destination, Validity Start, Validity End, Issuer, Public Key, Cert Thumbprint
Erase	No/Yes
Display Use Location	Displays what the key pair is being used for
CA Certificate List	
Certificate Details	Displays Version, Serial No., Signature Algorithm, Issue Destination, Validity Start, Validity End, Issuer, Public Key, Cert Thumbprint
Erase	No/Yes
Register Key and Cert.	
Register	
Key Name	Max. 24 characters
Password	Max. 24 characters
Erase	No/Yes
CA Cert. Registration	
Register	No/Yes
Erase	No/Yes
Use HTTP	OFF/ON*
Port Number Settings	
LPD	0 to 65535 (515*)
RAW	0 to 65535 (9100*)
HTTP	0 to 65535 (80*)
SMTP Receive	0 to 65535 (25*)
POP3 Receive	0 to 65535 (110*)
FTP Sending	0 to 65535 (21*)
SMTP Send	0 to 65535 (25*)
SNMP	0 to 65535 (161*)
WSD	1 to 65535 (3702*)
Proxy Settings	OFF*/ON
HTTP Proxy Server Address	Max. 128 characters
HTTP Proxy Server Port Number	1 to 65535 80*
Use Proxy in Same Domain	OFF*/ON
Use Proxy Authentication	OFF*/ON
User Name	Max. 24 characters
Password	Max. 24 characters
Receive MAC Address	OFF*/ON
Confirm Dept. ID Password	OFF/ON*
SMB Settings	OFF/ON*
Server Name	Max. 15 characters
Workgroup Name	Max. 15 characters
Comment	Max. 48 characters
Use LM Announce	OFF*/ON
SNMP Settings	OFF/ON*

System Management Set. > Network Settings	
Item	**Settings**
Community Name 1	Max. 15 characters (Public*)
Community Name 2	Max. 15 characters
Writable SNMP 1	OFF/ON*
Writable SNMP 2	OFF*/ON
Printer Mgt. Info from Host	OFF/ON*
Dedicated Port Settings	OFF/ON*
Startup Time Settings	0 to 300 Seconds 0*
Ethernet Driver Settings	
Auto Detect	OFF/ON*
Communication Mode	Half Duplex *, Full Duplex
Ethernet Type	10 Base-T*/100 Base-TX

T-1-59

System Management Set. > Network Settings	
Item	**Settings**
E-mail/I-Fax	
SMTP Receive	OFF */ON
POP	OFF */ON
SMTP Sever	Max. 47 characters
E-mail Address	Max 64 characters
POP Server	Max. 47 characters
POP Address	Max 32 characters
POP Password	Max 32 characters
POP Interval	0 to 99 Minutes *0
Authentication / Encryption	
POP Auth. Before Send	OFF*/ON
SMTP Authentication	OFF*/ON
Display Authentication Screen*2	OFF/ON*
Carry Over Authentication*2	OFF*/ON
User Name	Max 64 characters
Password	Max 32 characters
IEEE802.1X Settings	OFF*/ON
Login Name	Max. 24 characters
Use TLS	OFF*/ON
Key and Certificate	
Set as Default Key	No/Yes
Certificate Details	Displays Version, Serial No., Signature Algorithm, Issue Destination, Validity Start, Validity End, Issuer, Public Key, Cert Thumbprint
Display Use Location	Displays what the key pair is being used for
Use TTLS	OFF*/ON
TTLS Set. (TTLS Internal Protocol)	MSCHAPv2/PAP
Use PEAP	OFF*/ON
LoginName as UserName	OFF*/ON
User Name	Max. 24 characters
Password	Max. 24 characters

Communication Settings

T-1-60

System Management Set. > Communication Settings	
Item	**Settings**
E-mail/I-Fax Settings	
Send Data Size Limit	0 to 99MB (3MB*)
Divide TX Data Oversize.	OFF*/ON
Default Subject	Max 40 characters (Attached Image*)
Fax Settings*1	
Send Start Speed	33600*/14400/9600/7200/4800/2400 bps
Receive Start Speed	33600*/14400/9600/7200/4800/2400 bps
Memory Lock Settings	OFF*/ON
Memory Lock Password	Max. 7 digits
Report Print	OFF*/ON
Memory Lock Time Settings	Do not Specify *, Specify
Select Country/Region	Brazil, Canada, United States, Mexico, Others

Forwarding Settings

T-1-61

System Management Set. > Forwarding Settings	
Item	**Settings**
Register	
Fowarding Cond. Name	Max. 50 characters
Forwarding Condition Setting	Fax *, I-Fax
Forwarding Condition	disregard, Do Not Exist*, equals, differs from, begins with, ends with, contains, does not contain * Only when <Fax> is selected in <Forwarding Conditions Settings>.
Forwarding destination	Select from the list of registered addresses
File Format	When <Fax> is selected in <Forwarding Conditions Settings>: TIFF *, PDF When <I-Fax> is selected in <Forwarding Conditions Settings>: TIFF(Black)/PDF(Color) *, TIFF(Black)/JPEG(Color), PDF, PDF(Black)/JPEG(Color)
Divide Pages	OFF*/ON
Forward w/o Condition	Fax*/I-Fax
Forwarding Destination	Select from the list of registered addresses
File Format	When <Fax> is selected in <Forwarding Conditions Settings>: TIFF *, PDF When <I-Fax> is selected in <Forwarding Conditions Settings>: TIFF(Black)/PDF(Color) *, TIFF(Black)/JPEG(Color), PDF, PDF(Black)/JPEG(Color)
Divide Pages	OFF*/ON
Erase	Is it OK to erase? No / Yes
Print List	Do you want to print the forwarding conditions list? No / Yes
Details / Edit	Same as <Register>

Store/Print When Fwding

T-1-62

System Management Set. > Store/Print When Fwding.	
Item	**Settings**
Print Image	OFF/ON* Only When Error Occurs
Store Image to Memory	Do Not Store*/ Only When Error Occurs

Remote UI

T-1-63

System Management Set. > Remote UI	
Item	**Settings**
(Remote UI)	OFF/ON*

Restrict the Send Function

T-1-64

System Management Set. > Send Function Restriction	
Item	**Settings**
Address Book Password	Max. 7 digits
Restrict New Addresses	OFF*/ON
Allow Fax Driver TX*1	OFF/ON*
Restrict Sending From Log	OFF*/ON
Confirm Entered Fax No.*1	OFF*/ON
Restrict Seq. Broadcast	Off *, Broadcast Confirmation, Prohibit Broadcast

Auto Online/Offline

T-1-65

System Management Set. > Auto Online/Offline	
Item	**Settings**
Auto Online	OFF*/ON
Auto Offline	OFF*/ON

Register LDAP Server

T-1-66

System Management Set. > Auto Online/Offline				
Item				**Settings**
Register				
	Server Name			Max. 24 characters
	Server Address			Max. 47 characters
	Loc. to Start Search			Max. 120 characters
	Port Number			1 to 65535 (389)
	Search Dest. Limit			1 to 1000 (100)
	Search Timeout			30 to 300 seconds (60)
	Login Information			
		Do Not Use		
			Server LDAP Version and Char. Code	Ver. 3 (UTF-8)* / Ver. 2 (UTF-8) / Ver. 2 (SJIS) / Ver. 2 (EUC) / Ver. 2 (JIS) / Ver. 2 (ISO8859)
		Use		
			Carry Over Send Auth.*2	OFF*/ON
			User Name	Max. 120 characters
			Password	Max. 24 characters
			Display Auth. Screen	OFF*/ON
			Server LDAP Version and Char. Code	Ver. 3 (UTF-8)* / Ver. 2 (UTF-8) / Ver. 2 (SJIS) / Ver. 2 (EUC) / Ver. 2 (JIS) / Ver. 2 (ISO8859)
		Use (Sec. Auth.): Ver 3 (UTF-8)		
			Carry Over Send Auth.*2	OFF*/ON
			User Name	Max. 120 characters
			Password	Max. 24 characters
			Domain Name	Max. 120 characters
			Display Auth. Screen	OFF*/ON
Details/Edit				Same as <Register>
Erase				No/Yes
Print List				No/Yes
Reg/Edit LDAP Search Attributes				
	Not Registered 1			
		Display Name		Max. 11 characters
		Attribute Name		Max. 64 characters
	Not Registered 2			
		Display Name		Max. 11 characters
		Attribute Name		Max. 64 characters

Job Log Display

T-1-67

System Management Set. > Job Log Display	
Item	**Settings**
(Job Log Display)	OFF/ON*

Memory Media Store Log

T-1-68

System Management Set. > Memory Media Store Log	
Item	**Settings**
(Memory Media Store Log)	Do Not Retain *, Retain

Register License

T-1-69

System Management Set. > Register License	
Item	**Settings**
(Register License)	Enter a license key

USB Device

T-1-70

System Management Set. > Use USB Device	
Item	**Settings**
(USB Device)	OFF/ON*

Dept. ID/User Name Display

T-1-71

System Management Set. > Dept. ID/User Name Display	
Item	**Settings**
(Dept. ID/User Name Display)	OFF/ON*
PDL Selection (PnP)	
Memory Media Settings	
Store on Memory Media	OFF*/ON
Direct Print	OFF*/ON
Update Firmware	This function is used only when it is necessary to update the firmware.
Start Setup Guide	No/Yes

1.2.4 Maintenance by the User

1.2.4.1 Cleaning

imageRUNNER C1022 / imageRUNNER C1022i

If the original is not copied clearly, clean the machine. For high-quality printouts, we recommend cleaning the machine once or twice a month.

- Do not use alcohol, benzene, paint thinner, or other solvents for cleaning. Doing so may result in damage to the plastic parts.
- Do not use tissue paper, paper towels, or similar materials for cleaning; they can stick to the components or generate static charges.
- Disconnect the power cord from the power outlet regularly, and clean the area around the base of the power plug's metal pins and the power outlet with a dry cloth to ensure that all dust and grime is removed. If the power cord is connected for a long period of time in a damp, dusty, or smoky location, dust can build up around the power plug and become damp. This may cause a short circuit and result in a fire.

MEMO:
- You cannot send or receive documents when the main power switch is turned off or the power cord is disconnected.

- If the main power switch is turned ON, all jobs waiting in the print queue will be erased.

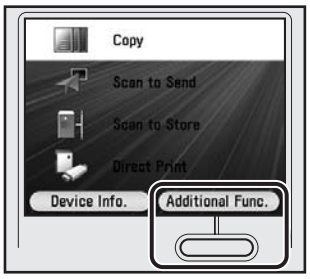
- Documents received into memory and documents stored for delayed send will be retained for approximately 60 minutes after the power cord has been disconnected.

Exterior
Clean the exterior of the machine.
1) Turn OFF the main power switch and disconnect the power cord.
2) Wipe the machine's exterior with a clean, soft, lint-free cloth dampened with water or diluted dishwashing detergent solution.
3) Wait for the machine to dry, then reconnect the power cord and turn ON the main power switch.

Interior
Clean the machine's print area periodically to prevent toner powder and paper dust from accumulating inside.
Cleaning the Fixing Unit
If black streaks appear on printed output, the fixing unit may be dirty. Also, you should use the Fixing Unit Cleaning procedure every time the toner cartridge is replaced. Print the cleaning pattern on LTR paper for cleaning the fixing unit.

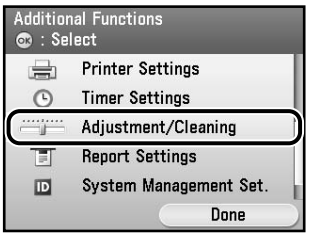
MEMO:
- As cleaning paper, LTR or A4 paper must be loaded in the paper drawer or the stack bypass tray.
- Cleaning the fixing unit takes approximately 60 seconds.

1) Press (Main Menu).
2) Press the right Any key to select <Additional Func>.



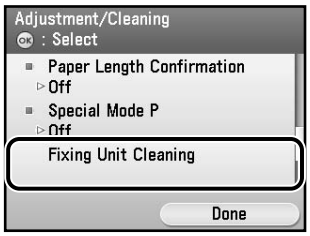
F-1-12

3) Use [▲], [▼], or (Scroll Wheel) to select <Adjustment/Cleaning>, then press [OK].



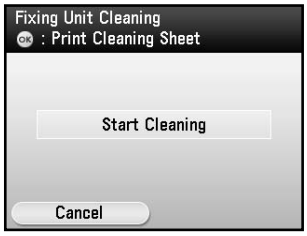
F-1-13

4) Use [▲], [▼], or (Scroll Wheel) to select <Fixing Unit Cleaning>, then press [OK].



F-1-14

5) Confirm that <Start Cleaning> is displayed, then press [OK].
Printing starts.



F-1-15

The display returns to the Adjustment/Cleaning screen.

MEMO:
- Discard the cleaning sheet after use.
- The cleaning process cannot be canceled. Please wait until it is completed.

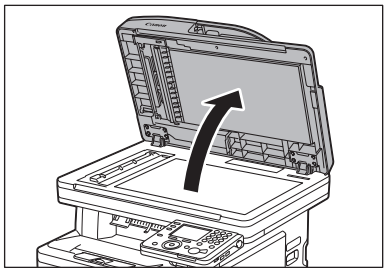
6) Press (Main Menu) to return to the Main Menu screen.

Scanning Area
Keep the scanning area clean to avoid dirty copies or faxes to be sent.

Cleaning the Platen Glass
Clean the platen glass and the underside of the feeder by following the procedure below.

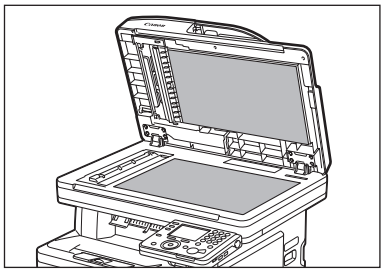
⚠ When cleaning the machine, first turn OFF the main power switch, and disconnect the power cord. Failure to observe these steps may result in a fire or electrical shock.

1) Open the feeder.



F-1-16

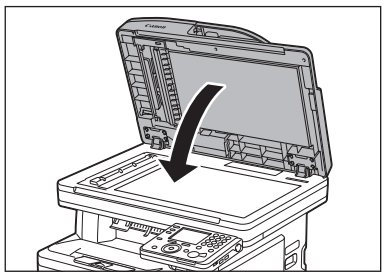
2) Clean the platen glass and the underside of the feeder with a cloth dampened with water. Then, wipe the area with a soft, dry cloth.



F-1-17

MEMO:
Do not dampen the cloth too much, as this may tear the document or damage the machine.

3) Close the feeder.

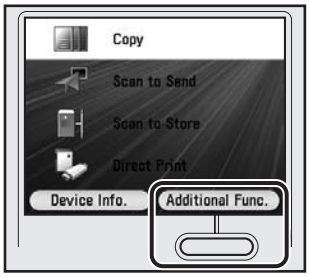


F-1-18

Cleaning the Feeder Automatically
If your originals have black streaks or appear dirty after scanning them through the feeder, clean the rollers of the feeder.

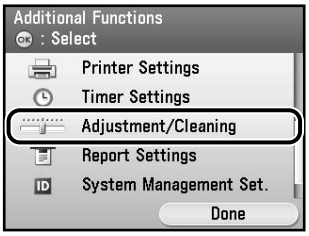
MEMO:
- Use LTR or A4 paper as cleaning paper.
- It takes approximately 30 seconds to clean the feeder.

1) Press (Main Menu).
2) Press the right Any key to select <Additional Func>.



F-1-19

3) Use [▲], [▼], or (Scroll Wheel) to select <Adjustment/Cleaning>, then press [OK].

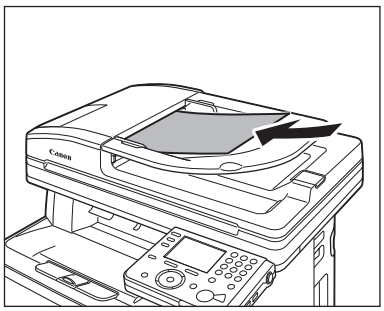


F-1-20

4) Use [▲], [▼], or (Scroll Wheel) to select <Feeder Cleaning>, then press [OK].

F-1-21

5) Place 10 sheets of blank paper into the feeder.



F-1-22

6) Confirm that <Start> is displayed, then press [OK].

F-1-23

The display returns to the Adjustment/Cleaning screen.

MEMO:
- Discard the cleaning sheet after use.
- The cleaning process cannot be canceled. Please wait until it is completed.

7) Press (Main Menu) to return to the Main Menu screen.

1.2.4.2 Cleaning

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

If the original is not copied clearly, clean the machine. For high-quality printouts, we recommend cleaning the machine once or twice a month.

- Do not use alcohol, benzene, paint thinner, or other solvents for cleaning. Doing so may result in damage to the plastic parts.
- Do not use tissue paper, paper towels, or similar materials for cleaning; they can stick to the components or generate static charges.
- Disconnect the power cord from the power outlet regularly, and clean the area around the base of the power plug's metal pins and the power outlet with a dry cloth to ensure that all dust and grime is removed. If the power cord is connected for a long period of time in a damp, dusty, or smoky location, dust can build up around the power plug and become damp. This may cause a short circuit and result in a fire.

MEMO:
- You cannot send or receive documents when the main power switch is turned off or the power cord is disconnected.

- If the main power switch is turned ON, all jobs waiting in the print queue will be erased.

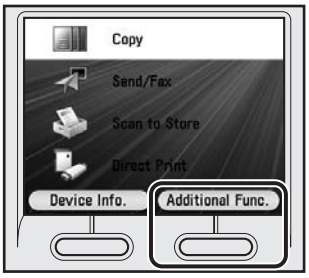
- Documents received into memory and documents stored for delayed send will be retained for approximately 60 minutes after the power cord has been disconnected.

Exterior
Clean the exterior of the machine.
1) Turn OFF the main power switch and disconnect the power cord.
2) Wipe the machine's exterior with a clean, soft, lint-free cloth dampened with water or diluted dishwashing detergent solution.
3) Wait for the machine to dry, then reconnect the power cord and turn ON the main power switch.

Interior
Clean the machine's print area periodically to prevent toner powder and paper dust from accumulating inside.
Cleaning the Fixing Unit
If black streaks appear on printed output, the fixing unit may be dirty. Also, you should use the Fixing Unit Cleaning procedure every time the toner cartridge is replaced. Print the cleaning pattern on LTR paper for cleaning the fixing unit.

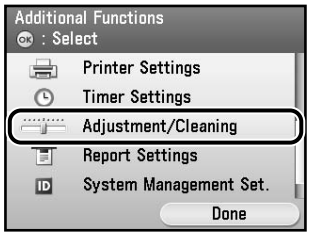
MEMO:
- As cleaning paper, LTR or A4 paper must be loaded in the paper drawer or the stack bypass tray.
- Cleaning the fixing unit takes approximately 60 seconds.

1) Press (Main Menu).
2) Press the right Any key to select <Additional Func>.



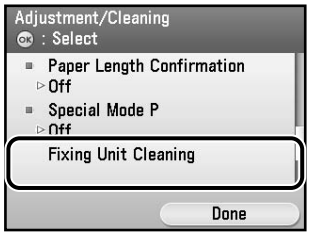
F-1-24

3) Use [▲], [▼], or (Scroll Wheel) to select <Adjustment/Cleaning>, then press [OK].



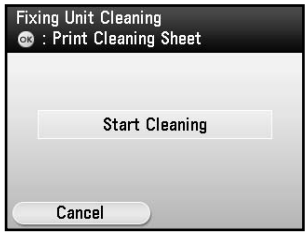
F-1-25

4) Use [▲], [▼], or (Scroll Wheel) to select <Fixing Unit Cleaning>, then press [OK].



F-1-26

5) Confirm that <Start Cleaning> is displayed, then press [OK].
Printing starts.



F-1-27

The display returns to the Adjustment/Cleaning screen.

MEMO:
- Discard the cleaning sheet after use.
- The cleaning process cannot be canceled. Please wait until it is completed.

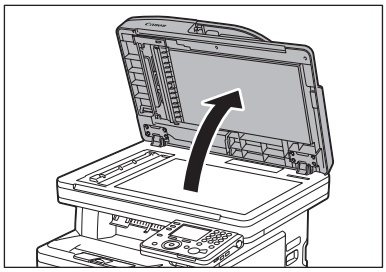
6) Press (Main Menu) to return to the Main Menu screen.

Scanning Area
Keep the scanning area clean to avoid dirty copies or faxes to be sent.

Cleaning the Platen Glass
Clean the platen glass and the underside of the feeder by following the procedure below.

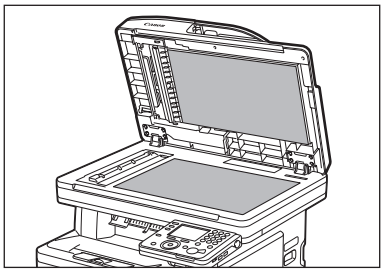
⚠
When cleaning the machine, first turn OFF the main power switch, and disconnect the power cord. Failure to observe these steps may result in a fire or electrical shock.

1) Open the feeder.



F-1-28

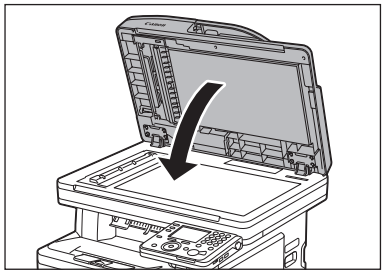
2) Clean the platen glass and the underside of the feeder with a cloth dampened with water. Then, wipe the area with a soft, dry cloth.



F-1-29

MEMO:
Do not dampen the cloth too much, as this may tear the document or damage the machine.

3) Close the feeder.



F-1-30

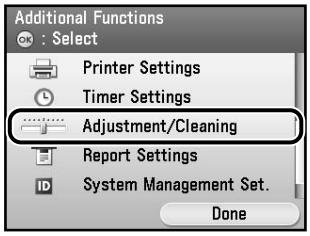
Cleaning the Feeder Automatically
If your originals have black streaks or appear dirty after scanning them through the feeder, clean the rollers of the feeder.

MEMO:
- Use LTR or A4 paper as cleaning paper.
- It takes approximately 30 seconds to clean the feeder.

1) Press (Main Menu).
2) Press the right Any key to select <Additional Func>.

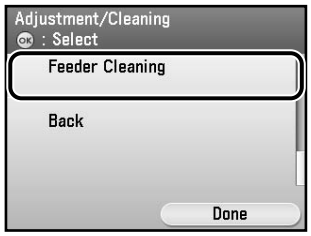
F-1-31

3) Use [▲], [▼], or (Scroll Wheel) to select <Adjustment/Cleaning>, then press [OK].



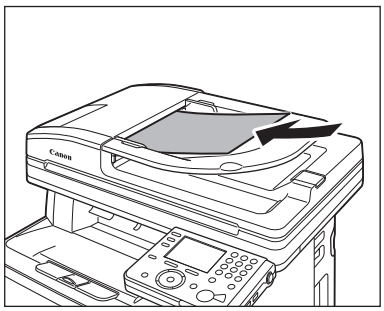
F-1-32

4) Use [▲], [▼], or (Scroll Wheel) to select <Feeder Cleaning>, then press [OK].



F-1-33

5) Place 10 sheets of blank paper into the feeder.



F-1-34

6) Confirm that <Start> is displayed, then press [OK].

F-1-35

The display returns to the Adjustment/Cleaning screen.

MEMO:
- Discard the cleaning sheet after use.
- The cleaning process cannot be canceled. Please wait until it is completed.

7) Press (Main Menu) to return to the Main Menu screen.

1.2.5 Safety

1.2.5.1 Points to note at disassembly/assembly

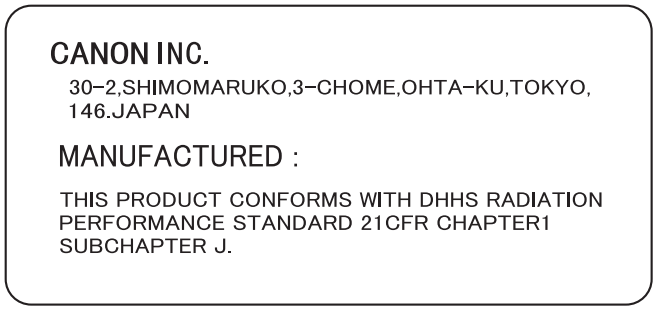
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Make sure to follow the instruction below at disassembly/assembly.
1. At disassembly/assembly, be sure to unplug the power plug for safety reason.
2. At assembly, execute the operation in the reverse order of disassembly procedure.
3. Take care not to make a mistake in the type of screws (length/diameter) and their usage locations in assembly.
4. To check the electrical continuity, a screw with washer is used for the grounding wire and the varistor etc. Make sure to use this screw when attaching them.
5. Do not operate the machine without any part.
6. At disassembly, do not remove the screw with bond lock.

1.2.5.2 CDRH Regulations

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The Center for Devices and Radiological Health of the US Food and Drum Administration put into force regulations concerning laser products on August 2, 1976. These regulations apply to laser products manufactured on and after August 1, 1976, and the sale of laser products not certified under the regulations is banned within the Untied States. The label shown here indicates compliance with the CDRH regulations, and its attachment is required on all laser products that are sold in the United States.



F-1-36

A different description may be used for a different product.

1.2.5.3 Safety of the Laser Light

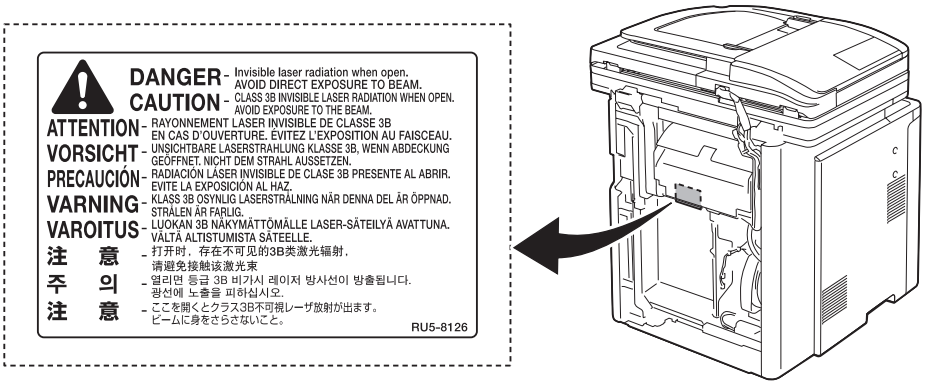
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Laser light can prove to be hazardous to the human body. The machine's laser unit is fully enclosed in a protective housing and external covers so that its light will not escape outside as long as the machine is used normally.

1.2.5.4 Handling the Laser Unit

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The laser/scanner unit emits invisible laser beam. DO NOT disassemble the unit as the laser beam can possibly damage your eyes. The unit cannot be adjusted in the field. The following label is attached to the plate behind the unit:



F-1-37

1.2.5.5 Safety of Toner

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

About Toner
The machine's toner is a non-toxic material made of plastic, iron, and small amounts of dye.

> ⚠
> Do not throw toner into fire. It may cause explosion.

Toner on Clothing or Skin
1. If your clothing or skin has come into contact with toner, wipe it off with tissue; then, wash it off with water.
2. Be sure to use water at room temperature for cleaning toner on clothing; Using warm water may cause the toner to jell and fuse permanently with the fibers of the cloth.
3. Do not bring toner into contact with plastic material. It tends to react easily.

Storage of copy/print output
Do not use transparent polyvinyl case.
If printed side contact with the surface of case, toner melts and the paper may be adhered with a case.

1.2.5.6 Notes when handling a battery

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

> ⚠
> RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
> DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

The following warnings are given to comply with Safety Principles (EN60950).

> ⚠
> Wenn mit dem falschen Typ ausgewechselt, besteht Explosionsgefahr.
> Gebrauchte Batterien gemäß der Anleitung beseitigen.

1.2.6 Product Specifications

1.2.6.1 Main Body Specifications

imageRUNNER C1022 / imageRUNNER C1022i

Copyboard	Fixed copyboard
Body	Desktop
Light source type	Cold-cathode tube
Lens type	Fixed focal length lens
Photosensitive medium	OPC drum (24 mm dia)
Image reading method	CCD
Exposure method	2-polygon 4-laser (2-beam/laser)
Charging method	Roller charging
Development method	Contact development
Attraction method	Roller attraction
Transfer method	Direct transfer (ETB: Electrostatic Transportation Belt)
Separation method	Curvature separation
Cassette pickup method	Duplo (Center line)
Multifeeder pickup method	Duplo (Center line)
Drum cleaning method	Cleaning blade
Transfer cleaning method	Electrostatic cleaning
Fixing method	On-demand fixing
Delivery method	Face down
Toner level detection function	Provided
Toner type	Nonmagnetic 1-component toner
Toner supply type	All-in-one cartridge
Toner save mode	Provided
Original type	Sheet, book, 3-D object (Up to 2kg)
Maximum original size	A4/ LTR/ LGL
Original size detection function	Not provided
Reproduction ratio	50% to 200% (incremented by 1%), 50%, 70%, 81%, 86%, 100%, 115%, 122%, 141%, 200%
Warm-up time	Less than approx. 60 sec (Temperature: 20 degC, Humidity: 65%, from when the machine is turned on to when the standby screen is displayed)
Print area	At printing Paper other than envelope: Inside of the circumference of 5 mm Envelope: Inside of the circumference of 10 mm At copying Inside of the lead edge of 5 mm, both sides of 3 mm, and trailing edge of 5 mm At the time of printing a received message Inside of the lead edge of 5 mm, both sides of 3 mm, and trailing edge of 6 mm
Maximum non-image width (main scanning direction)	Less than +/- 0.5% (At stream reading: Not specified)
Maximum non-image width (sub scanning direction)	Less than +/- 0.5% (At stream reading: Less than +/- 1.0%)
Image margin (leading edge)	0 +/- 1.5 mm
Image margin (left/right)	Left edge: 0 +/- 1.5 mm (The right side is not detected.)
Non-image width (leading edge)	Less than 5.0 +/- 2.0 mm (When ADF is used (incl. stream reading): Less than 5.0 +/- 2.0 mm)
Non-image width (left/right)	Left edge: Less than 3.0 +/- 2.0 mm (When ADF is used (incl. stream reading): Less than 3.0 +/- 2.0 mm)
Gradation	256 gradation
Reading resolution	600 x 600 dpi
Reading speed	Fixed reading: Not specified Stream reading: Single-sided: 20.8ipm/LTR (600dpi), 19.7ipm/A4 (600dpi) Double-sided: Approx. 7ipm
Copying resolution	600 x 600dpi (ADF, copyboard)
Printing resolution	600 x 600 dpi
First copy time	(See "Print Speed") Fixed reading: Less than 12.5 sec (A4/LTR) Stream reading: Less than 18.5 sec (A4/LTR)
First print time	Less than 12.5 sec
Print speed	(See "Print Speed")
Print speed (A4)	21 ppm
Print speed(LTR)	22 ppm
Paper type	(See "Paper Type")

Cassette paper size	LTR, LGL, EXEC, FLSC, OFI, B-OFI, M-OFI, A4, A5, B5
Multifeeder paper size	LTR, LGL, STMT, EXEC, FLSC, OFI, B-OFI, M-OFI, G-LTR, G-LGL, A4, A5, B5, Custom Size, COM10, Monarch, DL, ISO-C5, ISO-B5
Cassette paper type	Plain, Recycled Paper, Color, Bond, Heavy, Rough
Multifeeder tray paper type	Plain, Recycled Paper, Color, Bond, Heavy, Rough, Transparencies, Labels
Cassette capacity	Paper cassette: 250 sheets Cassette Feeding Unit-AB1 (optional): 500 sheets (80g/m2)
Multifeeder tray capacity	100 sheets
Auto 2-sided printing	Provided
Duplex method	Automatic double-sided printing
Delivery tray stack	250 sheets (64 to 80g/m2)
Continuous reproduction	1 to 99 sheets
Memory	Main Unit RAM - 256MB: iR C1022/ iR C1021/ MF9330C - 768MB: iR C1022i/ iR C1021i/ iR C2110F/ iR C2110N/ MF9370C/ MF9340C Optional RAM (System Upgrade RAM-A1) - 512 MB: for iR C1022/ iR C1021/ MF9330C only
Hard disk	No (without options)
Sleep mode	Provided
Operating environment (temperature range)	10 to 30 degC
Operating environment (humidity range)	Humidity equivalent to 10 to 80%
Noise	At standby: - Less than 43dB (Sound power level) At copying: - B&W: 66.35dB - Color: 67.3dB
Power supply rating	Rated input voltage: 100 to 127V (100V model)/220 to 240V (200V model) Rated input frequency: 50/60Hz
Power consumption (maximum)	Less than 929W (Main unit only) Less than 949W (When Cassette Unit AB1/AC1 (optional) is installed)
Power consumption	At standby: Less than 28W At sleep mode: Less than 1W (100V model), Less than 1.2W (200V model)
Ozone	At initial use: Less than 0.01ppm, After service life: Less than 0.035ppm B&W: 1.5mg/hr Color: 3.0mg/hr
Dimensions	Dimension: 546 mm x 527 mm x 627 mm (Main unit only) 546 mm x 527 mm x 930 mm (When Cassette Feeding Unit-AB1 (optional) is installed) Installation space (Jam removal cover and ADF opened, Cassette pulled out): 546 mm x 1140 mm x 792 mm 546 mm x 1140 mm x 1095 mm (When Cassette Feeding Unit-AB1 (optional) is installed)
Weight	Approx. 44kg (incl. toner cartridge)
Option	See "System Configuration".

1.2.6.2 Main Body Specifications

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Copyboard	Fixed copyboard
Body	Desktop
Light source type	Cold-cathode tube
Lens type	Fixed focal length lens
Photosensitive medium	OPC drum (24 mm dia)
Image reading method	CCD
Exposure method	2-beam/laser (2-beam,4-polygon)
Charging method	Roller charging
Development method	Contact development
Attraction method	Roller attraction
Transfer method	Direct transfer (ETB: Electrostatic Transportation Belt)
Separation method	Curvature separation
Cassette pickup method	Duplo (Center line)
Multifeeder pickup method	Duplo (Center line)
Drum cleaning method	Cleaning blade

Transfer cleaning method	Electrostatic cleaning
Fixing method	On-demand fixing
Delivery method	Face down
Toner level detection function	Provided
Toner type	Nonmagnetic 1-component toner
Toner supply type	All-in-one cartridge
Toner save mode	Provided
Original type	Sheet, book, 3-D object (Up to 2kg)
Maximum original size	A4/ LGL
Original size detection function	Not provided
Reproduction ratio	1: 1 ±1.0%,1: 2.00,1:1.29,1:0.78,1:0.64,1:0.50 Zoom 0.50 to 2.00 (incremented by 1%)
Warm-up time	Less than approx. 60 sec (Temperature: 20 degC, Humidity: 65%, from when the machine is turned on to when the standby screen is displayed) * Warm-up time may differ depending on the condition and environment of the machine.
Print area	At printing Paper other than envelope: Inside of the circumference of 5 mm Envelope: Inside of the circumference of 10 mm At copying Inside of the lead edge of 5 mm, both sides of 3 mm, and trailing edge of 5 mm At the time of printing a received message Inside of the lead edge of 5 mm, both sides of 3 mm, and trailing edge of 6 mm
Maximum non-image width (main scanning direction)	Less than +/- 0.5% (At stream reading: Not specified)
Maximum non-image width (sub scanning direction)	Less than +/- 0.5% (At stream reading: Less than +/- 1.0%)
Image margin (leading edge)	0 +/- 1.5 mm
Image margin (left/right)	Left edge: 0 +/- 1.5 mm (The right side is not detected.)
Non-image width (leading edge)	Less than 5.0 +/- 2.0 mm (When ADF is used (incl. stream reading): Less than 5.0 +/- 2.0 mm)
Non-image width (left/right)	Left edge: Less than 3.0 +/- 2.0 mm (When ADF is used (incl. stream reading): Less than 3.0 +/- 2.0 mm)
Gradation	256 gradation
Reading resolution	600 x 600 dpi
Reading speed	Fixed reading: Not specified Stream reading: Single-sided: 20.8ipm/LTR (600dpi), 19.7ipm/A4 (600dpi) Double-sided: Approx. 7ipm
Copying resolution	600 x 600 dpi
Printing resolution	600 x 600 dpi
First copy time	Color Fixed reading: Less than 12.5 sec (A4/LTR) Stream reading: Less than 18.5 sec (A4/LTR) BW Fixed reading: Less than 12.0 sec (A4/LTR) Stream reading: Less than 18.0 sec (A4/LTR)
Print speed	(See "Print Speed")
Print speed (A4)	BW: 28ppm,Color: 21ppm
Print speed(LTR)	BW: 30ppm,Color: 22ppm
Paper type	(See "Paper Type")
Cassette paper size	A4,A5,B5,LTR,LGL,EXEC,FLSC,OFI,B-OFI,M-OFI
Multifeeder paper size	LTR, LGL, STMT, EXEC, FLSC, OFI, B-OFI, M-OFI, G-LTR, G-LGL, A4, A5, B5, Custom Size, COM10, Monarch, DL, ISO-C5, ISO-B5
Cassette paper type	Plain, Recycled Paper, Color, Heavy
Multifeeder tray paper type	Plain, Recycled Paper, Color, Heavy, Transparencies, Labels
Cassette capacity	Paper cassette: 250 sheets Cassette Feeding Unit-AB1 (optional): 500 sheets (80g/m2)
Multifeeder tray capacity	100 sheets
Auto 2-sided printing	Provided
Duplex method	Automatic double-sided printing
Delivery tray stack	250 sheets (64 to 80g/m2)
Continuous reproduction	1 to 99 sheets
Memory	768 MB (On-board: 256 MB,Expansion: 512 MB)
Hard disk	No (without options)
Sleep mode	Provided
Operating environment (temperature range)	10 to 30 degC
Operating environment (humidity range)	Humidity equivalent to 10 to 80%

Noise	At standby: - Less than 43dB (Sound power level) At copying: - B&W: 68.8dB - Color: 67.3dB
Power supply rating	Rated input voltage: 110 to 127V (120V model)/220 to 240V (200V model) Rated input frequency: 50/60Hz
Power consumption (maximum)	Less than 1300W (Main unit only) Less than 1350W (When Cassette Unit AB1 (optional) is installed)
Power consumption	At standby: Less than 32W At sleep mode: Less than 1W(100V model) At sleep mode: Less than 1.2W(200V model)
Ozone	At initial use: Less than 0.01ppm, After service life: Less than 0.035ppm B&W: 1.5mg/hr Color: 3.0mg/hr
Dimensions	Dimension: 546 mm x 527 mm x 632 mm (Main unit only) 546 mm x 527 mm x 936 mm (When Cassette Feeding Unit-AB1 (optional) is installed) Installation space (with drawer pulled out and with back cover and feeder open): 546 mm x 1140 mm x 792 mm 546 mm x 1140 mm x 1095 mm (with optional Cassette Feeding Unit-AB1 attached, drawer pulled out, and back cover and feeder open)
Weight	Approx. 44kg (incl. toner cartridge)
Option	See "System Configuration".

1.2.6.3 ADF Specifications

imageRUNNER C1022 / imageRUNNER C1022i

Paper size	AB type: A4R, B5R, A5R, A5, B6 (B6: Horizontal feeding only) Inch type: LGL, LTRR, STMTR, STMT (Length: 128 mm to 355.6 mm, Width: 139.7 mm to 215.9 mm)
Duplex paper size	A4R/B5R/A5R/A5/B6/LTRR/LGL/STMTR (B6: Horizontal feeding only)
Original type	Sheet document
Original orientation	Face-up
Original position	Center line
Original processing mode	Single-sided/Double-sided
Original reading	Stream reading
Stack	[J/J] A4/LTR: 50 sheets, LGL: 30 sheets [LL/HH] A4/LTR: 30 sheets, LGL: 15 sheets
Mixed original sizes	Enabled
Original AE detection	Provided

1.2.6.4 ADF Specifications

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Paper size	AB type: A4R, B5R, A5R, A5, B6 (B6: Horizontal feeding only) Inch type: LGL, LTRR, STMTR, STMT (Length: 128 mm to 355.6 mm, Width: 139.7 mm to 215.9 mm)
Duplex paper size	A4R/ LTRR/ LGL
Original type	Sheet document
Original orientation	Face-up
Original position	Center line
Original processing mode	Single-sided/Double-sided
Original reading	Stream reading
Stack	[J/J] A4/LTR: 50 sheets, LGL: 30 sheets [LL/HH] A4/LTR: 30 sheets, LGL: 15 sheets
Mixed original sizes	Enabled
Original AE detection	Provided

1.2.6.5 FAX Specifications

imageRUNNER C1022 / imageRUNNER C1022i

Applicable lines	Public Switched Telephone Network (PSTN) * PSTN currently supports the modem speed of up to 28.8Kbps. It, however, differs depending on the telephone line condition. Number of lines connected: 1
Transmission method	G3
Modulation method	Image modulation: V.34/V.17/V.29/V.27ter Transmission procedure: V.21
Transmission speed	Transmission speed: Approx. 3 sec per page ECM-JBIG, Transmitted from memory at 33.6Kbps * Based on the JBIG standard mode with ITU-T standard chart No. 1 Modem speed: 33,600bps, Automatic fallback
Coding	Compression method: JBIG, MMR, MR, MH
Error correction	ECM
Scanning line density	Reading: 8x 3.85/7.7/15.4 16x15.4 Recording: 600 x 600dpi
Scanning density adjustment	9 levels, manual adjustment
Half tone	256 gradation
Printing resolution	Resolution conversion: Provided <200 x 100dpi>: 8 pixels/mm x 3.85 lines/mm <200 x 200dpi>: 8 pixels/mm x 7.7 lines/mm <200 x 400dpi>: 8 pixels/mm x 15.4 lines/mm <400 x 400dpi>: 16 pixels/mm x 15.4 lines/mm
Reduction for reception	Automatic reduction of an image received: 75 to 100% (incremented by 1%)
FAX/TEL switching	Provided
Remote reception	Provided
Memory reception	Send/Receive memory: More than 1000 pages (Total number of sent/ received pages) *Based on the JBIG standard mode with ITU-T standard chart No. 1 Memory reception: Provided
Redial	Automatic redialing: Provided
Memory backup	Number of memories which can be accumulated: 1236 sheets Memory backup time: 1 hour
Time	Within 60 sec per month (Zone A) Within 90 sec per month (Zone B)
Others	Dialing method - Address book (300 destinations) Group dialing (299 destinations) (incl. One-touch button (200 destinations)) - Regular dialing (by numeric keys) - Automatic redialing, manual redialing (specified from the calling record) - Broadcast transmission (301 destinations) Output of reports - Communication management report (Automatically printed for every 40 calls) - Transmission result report / Reception result report Reception method - Automatic reception - Remote reception by a telephone set (Initial setting ID: 25)

1.2.6.6 FAX Specifications

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Applicable lines	Public Switched Telephone Network (PSTN) * PSTN currently supports the modem speed of up to 28.8Kbps. It, however, differs depending on the telephone line condition. Number of lines connected: 1
Transmission method	G3
Modulation method	Image modulation: V.34/V.17/V.29/V.27ter Transmission procedure: V.21
Transmission speed	Transmission speed: Approx. 3 sec per page ECM-JBIG, Transmitted from memory at 33.6Kbps * Based on the JBIG standard mode with ITU-T standard chart No. 1 Modem speed: 33,600bps, Automatic fallback
Coding	Compression method: JBIG, MMR, MR, MH
Error correction	ECM
Scanning line density	Reading: 8x 3.85/7.7/15.4 16x15.4 Recording: 600 x 600dpi
Scanning density adjustment	9 levels, manual adjustment
Half tone	256 gradation
Printing resolution	Resolution conversion: Provided <200 x 100dpi>: 8 pixels/mm x 3.85 lines/mm <200 x 200dpi>: 8 pixels/mm x 7.7 lines/mm <200 x 400dpi>: 8 pixels/mm x 15.4 lines/mm <400 x 400dpi>: 16 pixels/mm x 15.4 lines/mm
Reduction for reception	Automatic reduction of an image received: 75 to 100% (incremented by 1%)
FAX/TEL switching	Provided
Remote reception	Provided
Memory reception	Send/Receive memory: More than 1000 pages (Total number of sent/ received pages) *Based on the JBIG standard mode with ITU-T standard chart No. 1 Memory reception: Provided
Redial	Automatic redialing: Provided
Memory backup	Number of memories which can be accumulated: 1236 sheets Memory backup time: 1 hour
Time	Within 60 sec per month (Zone A) Within 90 sec per month (Zone B)
Others	Dialing method - Address book (100 destinations) - Group dialing (299 destinations) - One-touch button (200 destinations)) - Regular dialing (by numeric keys) - Automatic redialing, manual redialing (specified from the calling record) - Broadcast transmission (332 destinations) Output of reports - Communication management report (Automatically printed for every 40 calls) - Transmission result report / Reception result report - FAX communication management report (Automatically printed for every 40 calls) Reception method - Automatic reception - Remote reception by a telephone set (Initial setting ID: 25)

1.2.7 Function List

1.2.7.1 Print Speed

imageRUNNER C1022 / imageRUNNER C1022i

First copy time
The following standard is defined with "35 seconds" after printing 90 sheets of A4-size plain paper in the mode of "1 vs. multiple copies" *1 at copyboard reading.
(Unit: second)

T-1-72

Size		Mode/Pickup position	
		Single-sided printing	
		Cassette/Optional cassette	Manual feed tray
Plain paper	A4R	12.5	12.5
	LGL	16.3	16.3
	LTRR	12.5	12.5
Thick paper	A4R	-	15.7
	LGL	-	-
	LTRR	-	15.7

Print speed
(Unit: ppm)

T-1-73

Size		Mode/Pickup position							
		1 vs. multiple copies *1 (Fixed reading)				1 vs. 1 copy *1 (Stream reading)			
		Single-sided		Double-sided		Single-sided		Double-sided	
		Cassette/ Optional cassette	Manual feed tray	Cassette/ Optional cassette	Manual feed tray	Cassette/ Optional cassette	Manual feed tray	Cassette/ Optional cassette	Manual feed tray
Plain paper	A4R	21.0	21.0	10	10	19.7	19.7	7	7
	LGL	17.9	17.9	5	5	17.9	17.9	5	5
	LTRR	22.0	22.0	11	11	20.8	20.8	7	7
Thick paper	A4R	17	17	8.4	8.4	16.8	16.8	7	7
	LGL	14.3	14.3	4	4	14.3	14.3	4	4
	LTRR	17	17	8.8	8.8	17.6	17.6	7	7
Transparency *2		-	3.6 to 1.8	-	-	-	3.6 to 1.8	-	-
Postcard *2		-	10.1 to 2.5	-	-	-	10.1 to 2.5	-	-
Envelopes		-	3.2	-	-	-	3.2	-	-

*1: 1 vs. multiple copies: For example, make 10 copies of one sheet of document.
1 vs. 1 copy: For example, make one copy of one sheet of document.

*2: At the continuous print, printing speed may decelerate depending on the conditions.

1.2.7.2 Print Speed

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

First copy time

T-1-74

Size			Mode/Delivery /Pickup	
			Fixed reading	Stream reading
			Face-down delivery	Face-down delivery
			Cassette feeding	Cassette feeding
Plain paper	A4R	FC	less than 12.5 sec.	less than 18.5 sec.
		BW	less than 12.0 sec.	less than 18.0 sec.
	LTRR	FC	less than 12.5 sec.	less than 18.5 sec.
		BW	less than 12.0 sec.	less than 18.0 sec.

<Measurement condition>
Fixed reading with Copyboard CL: Copy time in full-color mode is measured "for 35 sec." after feeding 90 sheets of A4 size plain paper with 1 to N copy in full-color mode.
Fixed reading with Copyboard BW: Copy time in B&W mode is measured "for 35 sec." after feeding 1 sheet of A4 size plain paper with 1 to N copy in B&W mode.

Copy with Copyboard CL: Copy time in full-color mode is measured "for 3 min. 30 sec." after feeding 90 sheets of A4 size plain paper with 1 to N copy in full-color mode.
Copy with Copyboard BW: Copy time in B&W mode is measured "for 3 min. 30 sec." after feeding 1 sheet of A4 size plain paper with 1 to N copy in B&W mode.

* It is the measurement in A-zone environment.
* During the measurement under the precondition and condition, it is assumed that maintenance function such as "calibration", "toner ejection sequence", "toner level detection sequence", etc. is not performed.

Print speed
(Unit: ppm)

T-1-75

Size			**Mode/Pickup position**							
			Fixed reading 1toN				**Stream reading 1to1**			
			Single-sided		**Double-sided**		**Single-sided**		**Double-sided *2 (Unit: number of sheets/ minute)**	
			Cassette/ Optional cassette	**Manual feed tray**	**Cassette/ Optional cassette**	**Manual feed tray**	**Cassette/ Optional cassette**	**Manual feed tray**	**Cassette/ Optional cassette**	**Manual feed tray**
Plain paper	A4R	FC	20.9	20.9	10	10	19.7	19.7	7	7
		BW	28.5	28.5	14	14				
	LGL	FC	17.9	17.9	5	5	16.9	16.9	5	5
		BW	24.5	24.5	7	7				
	LTRR	FC	22	22	11	11	20.8	20.8		
		BW	30	30	15	15			7	7
Heavy paper	A4R	16.8	16.8	16.8	8.4	8.4	16.8	16.8	-	-
	LGL	14.3	14.3	14.3	4	4	14.3	14.3	-	-
	LTRR	17.6	17.6	17.6	8.8	8.8	17.6	17.6	-	-

*1: The number of prints per minute must be between +10% and -0% from the specified value.

*2: Copy speed for 2-sided print at stream reading is reference value because it depends on duplex reading speed of ADF.

1.2.7.3 Paper Type

imageRUNNER C1022 / imageRUNNER C1022i

Paper Type
Supported paper types are shown below:
A: available
-: not available

T-1-76

Type	Weight	Cassette/ Optional cassette	Manual feed tray
Plain	From 19 to 24 lb (70 to 90 g/m2)	A	A
Plain H	From 20 to 28 lb (75 to 105 g/m2)	A	A
Color	From 19 to 24 lb (70 to 90 g/m2)	A	A
Recycled	From 19 to 24 lb (70 to 90 g/m2)	A	A
Heavy 1	From 28 to 32 lb (106 to 120 g/m2)	A	A
Heavy 2	From 32 to 47 lb (121 to 176 g/m2)	-	A
Bond	20 lb (75 g/m2)	A	A
Transparency *	-	-	A
Labels	-	-	A
Envelopes	-	-	A
Rough	-	A	A

*: Use only LTR transparencies made especially for this machine.

Paper Size
Supported paper sizes are shown below.

T-1-77

	Cassette/Optional cassette	Manual feed tray
Size (W x L)	Legal, Letter, Officio, M-Officio, B-Offficio, Executive, Foolscap, A4, B5, A5	3" x 5" to Legal (8 1/2" x 14") (76.2 x 127 to 215.9 mm x 355.6 mm) (Always set vertically.)

MEMO:
The default paper size is LTR. If you use a different paper size, you must change the paper size settings.

Chapter 2 Installation

Contents

2.1 Making Pre-Checks 2-1
2.1.1 Checking Installation Environment 2-1
2.1.2 Points to Note Before Installation 2-1
2.1.3 Checking Contents 2-2
2.2 Unpacking and Installation 2-3
2.2.1 Unpacking 2-3
2.2.2 Installation 2-4
2.2.3 Installing Others 2-5
2.2.4 Securing Product 2-5
2.2.5 Cassette Settings 2-6
2.2.6 Points to Note When Turning OFF Host Machine 2-6
2.2.7 Connecting Cables 2-6
2.2.8 Auto Gradation Adjustment 2-6
2.3 Checking the Connection to the Network 2-7
2.3.1 Setting Up the Network 2-7
2.3.2 Procedure for Ping Operation 2-7
2.3.3 Checking with Remote Host Address 2-7
2.3.4 Troubleshooting Network Connection 2-7
2.3.5 Checking with Loopback Address 2-8
2.3.6 Checking with Local Host Address 2-8
2.4 Checking the Images/Operations 2-8
2.4.1 Checking Image Operation 2-8
2.5 Installing the Card Reader 2-8
2.5.1 Notice At Installation 2-8
2.5.2 Checking the Contents 2-8
2.5.3 Turning OFF the Power of the Host Machine 2-9
2.5.4 Installation Procedure 2-9
2.5.5 Card ID Registration 2-10
2.5.6 Installation Procedure in the imageWARE Accounting Manager (hereinafter referred to iWAM) Environment 2-12
2.6 Installing the Hand Set 2-12
2.6.1 Points to Note At Installation 2-12
2.6.2 Checking the Contents 2-12
2.6.3 Turning OFF the Power of the Host Machine 2-12
2.6.4 Installation Procedure 2-12
2.7 Installing the Memory 2-13
2.7.1 Checking the Contents 2-13
2.7.2 Checking Before Memory Expansion 2-14
2.7.3 Turning OFF the Power of the Host Machine 2-14
2.7.4 Installation Procedure 2-14
2.7.5 Checking After Memory Expansion 2-14

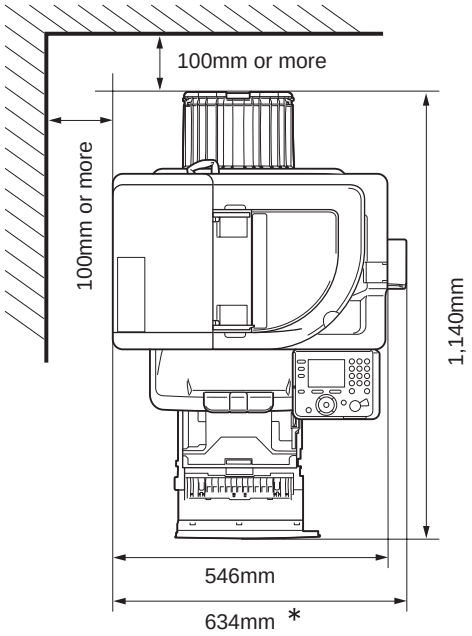
2.1 Making Pre-Checks

2.1.1 Checking Installation Environment

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The followings are the condition for installation environment.
It is better to see the planned location of installation before carrying the machine in the user site.

1) Installation environment must be with in the following range. Avoid the close location to the faucet, water heater, humidifier or refrigerator.
   Assured range of operation/image: temperature 10.0 to 30.0 deg C, humidity 20 to 80%
2) Avoid fire, dusty place and the location where ammonia gas is generated. Also, if the machine receives direct sunlight at installation location, it is recommended to put curtains on the window.
3) The ozone amount that is generated during operation with this machine does not cause a hazard to human health; however, its odor may be recognized if the machine is used for many hours in the poor ventilated location. Thus, provide adequate ventilation to keep the operation environment comfortable.
4) Make sure that the foot of the host machine does not float, and also, the machine is leveled.
5) Install the machine in well-ventilated location; however, do not install this machine near the air inlet of a room.
6) Allocate enough space for service operation of this machine.



F-2-1

* When the optional Card Reader is attached.

2.1.2 Points to Note Before Installation

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

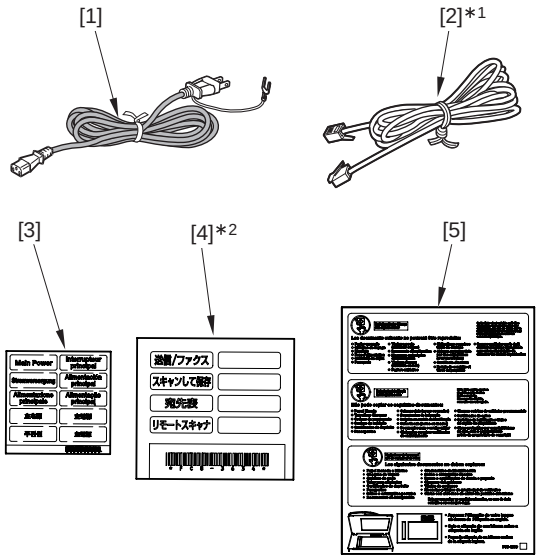
Make sure to note the followings before installing the machine.

1) If moving the machine from the cold place to a warm place abruptly, dew condensation is generated inside machine and it may cause various image failures. Thus unpack and place the machine in warm place for 2 hours or more to accustom the machine to room temperature before installation.
   (Condensation: condensation commonly occurs when a vapor is cooled to a liquid. For example, when metals are moved from a cool place to a warm place, vapors around metals are cooled into a liquid and attaches to metals.)
2) Since this machine weighs approx. 44kg make sure to lift it with 2 people or more and also lift it in a horizontal position.

2.1.3 Checking Contents

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

NOTE:
Make sure that the toner cartridges (Bk, Y, C, M) are installed in the host machine.
Make sure to remove the contents inside the cassette.



[1]	Power code	1 pc.	[2]*1	Telephone code	1 pc.
[3]	Main power supply label	1 pc.	[4]*2	Customize Label	1 pc.
[5]	Copy Inhibit Label	1 pc.			

*1 Only for iR C1022i and Color imageRUNNER C1030iF.

*2 Since users will use this label, make sure to give it to users.

Refer to the following for Guides / CDs.

T-2-1

	iR C1022	iR C1022i	Color imageRUNNER C1030	Color imageRUNNER C1030iF
Starter Guide	Yes	Yes	Yes	Yes
Basic Guide	Yes	Yes	Yes	Yes
User Software CD	Yes	Yes	Yes	Yes
Manual CD	Yes	Yes	Yes	Yes
Warranty Note	Yes	Yes	Yes	Yes
CRG Warranty Nofte	Yes	Yes	Yes	Yes
Registration Card	Yes	Yes	Yes	Yes
PCL Driver CD	Not	Yes	Not	Yes
notice for Win7	Yes	Yes	Not	Not

Yes: Included, - : Not included

2.2 Unpacking and Installation

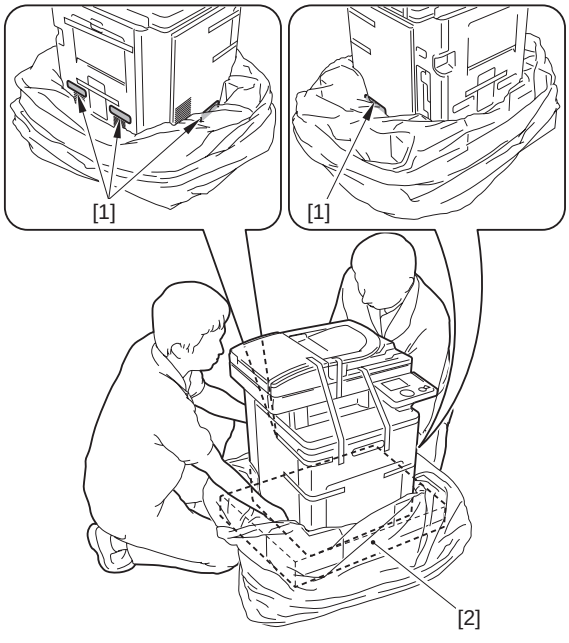
2.2.1 Unpacking

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

NOTE:
When installing the Cassette Feeding Unit, put the host machine on the Cassette Feeding Unit. (Refer to the instruction sheet included with the cassette pedestal when installing the cassette pedestal.)

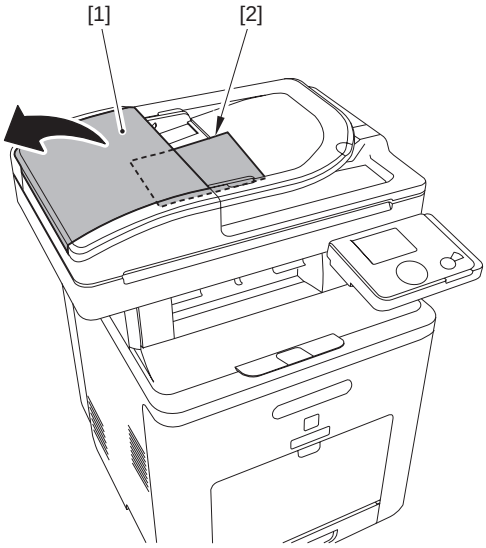
1) Unpack the host machine.
2) Hold the 4 grips [1], and lift down the host machine from the palette [2].

CAUTION:
Since this machine weighs 44kg at the maximum, make sure to lift it with 2 people or more. In addition, lift it in a horizontal position.



F-2-2

3) Remove all tapes and fixing members on the host machine.
4) Remove the A5 paper [2] on the feeder [1].

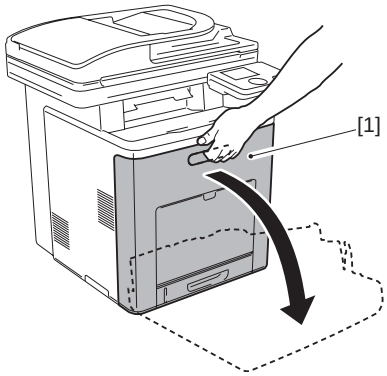


F-2-3

2.2.2 Installation

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

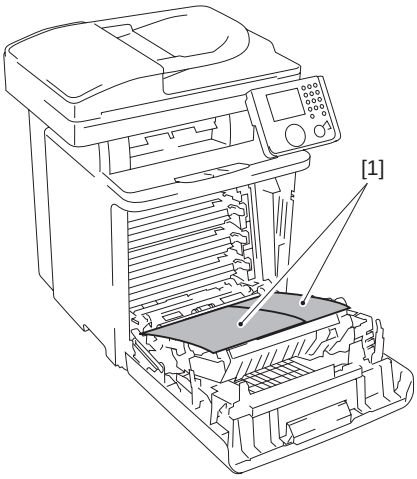
1) Open the front cover [1].



F-2-4

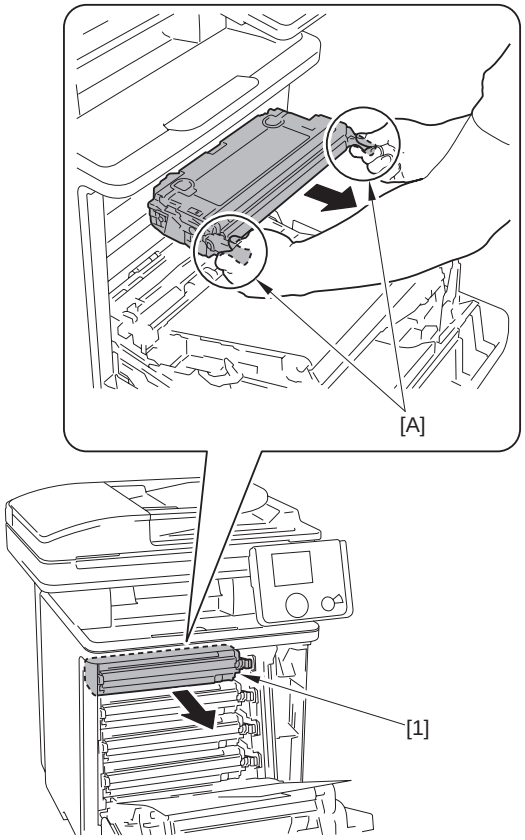
2) Place 2 sheets of A4 paper [1] on ETB side-by-side.

CAUTION: Points to note when installing/removing the toner cartridge
- To protect ETB, make sure to place the paper on ETB when handing it.
- Be careful not to damage or scratch the ETB unit. (It causes a pickup failure or lowers the print quality.



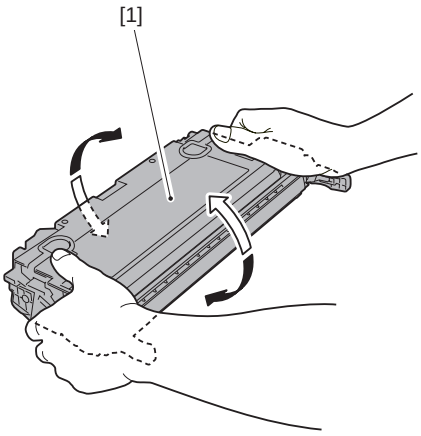
F-2-5

3) Hold the grip [A] and remove the Bk toner cartridge [1].



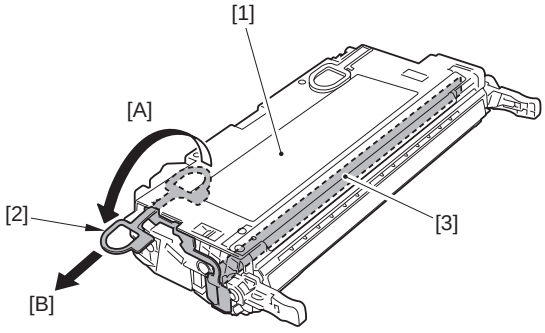
F-2-6

4) Hold the Bk toner cartridge [1] as below with both hands and shake it 5 to 6 times in the direction of the arrow to even the toner.



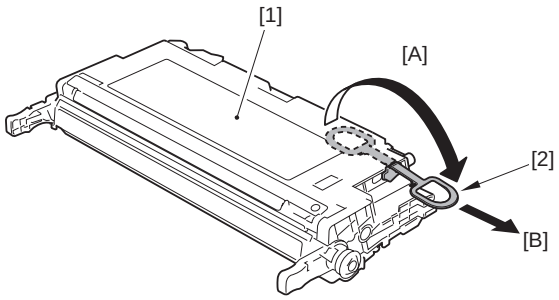
F-2-7

5) With holding the Bk toner cartridge [1], lift the tab [2] in the [A] direction and pull it out in the [B] direction.



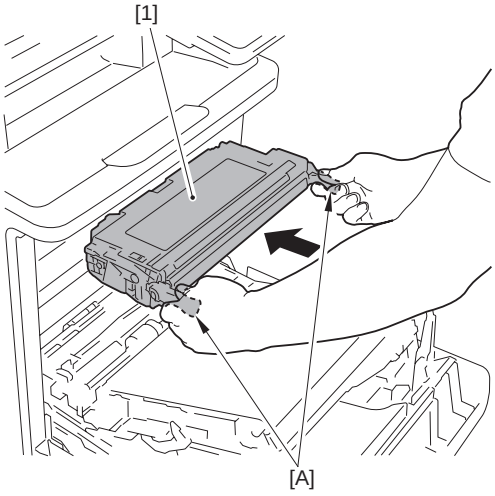
F-2-8

6) With holding the Bk toner cartridge [1], lift the tab [2] in the [A] direction and pull out the sealing tape [3] in [B] direction.



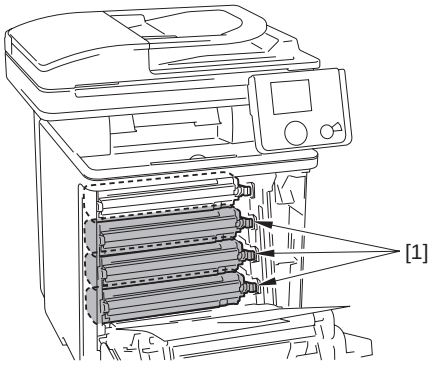
F-2-9

7) Hold the grip [A] of the Bk toner cartridge [1] and install it in the direction of the arrow.



F-2-10

8) Repeat the step 3) to step 7) to install Y, C, M toner cartridges.



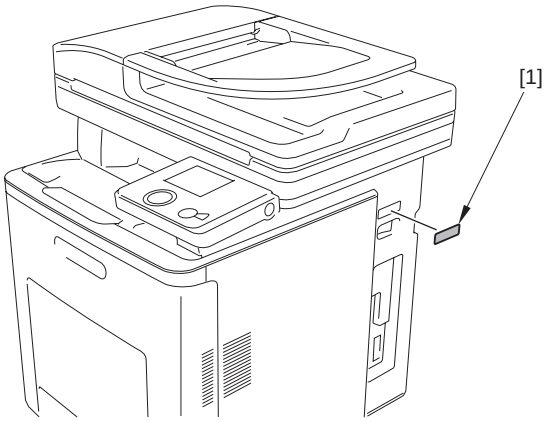
F-2-11

9) Remove the paper on the ETB.
10) Close the front cover.

2.2.3 Installing Others

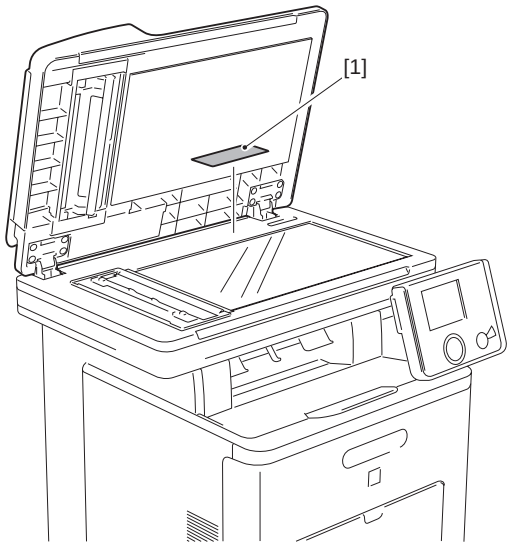
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<Main power label>
1) Put the main power label [1] in the appropriate language on the host machine's right cover.



F-2-12

<Copy Inhibit Label>
1) Open the feeder, and attach the copy inhibit label [1] in the language matching to the location over the label attached at shipment. (A label in english is attached at shipment.)

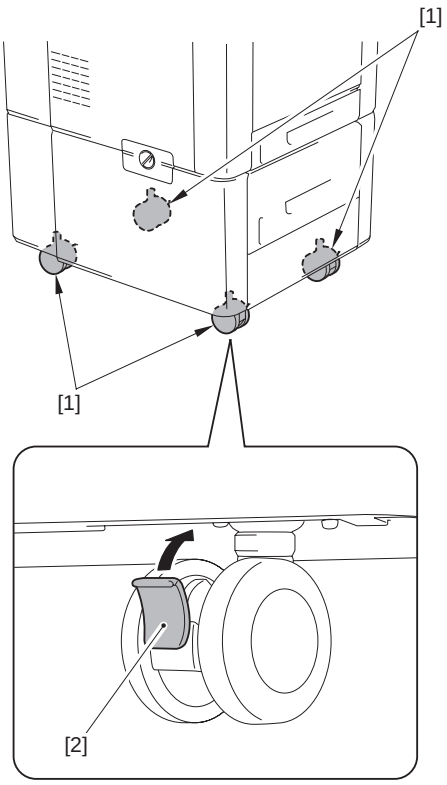


F-2-13

2.2.4 Securing Product

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<When Cassette Feeding Unit is installed>
1) Move the host machine in the installation location and fix the 4 casters [1] of Cassette Feeding Unit with the 4 fixing levers [2].



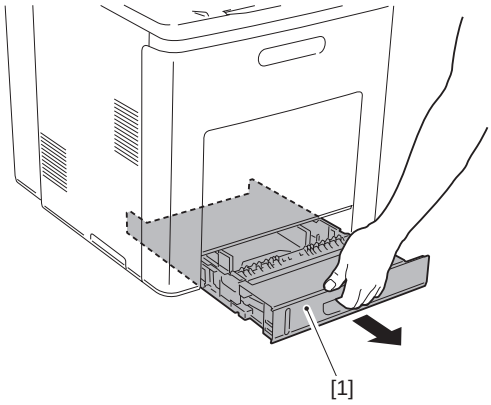
F-2-14

2.2.5 Cassette Settings

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

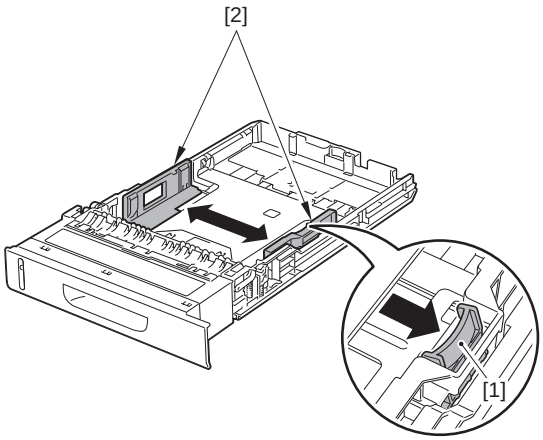
CAUTION: Points to note when setting the paper
Make sure to remove the cassette when setting the paper.

1) Remove the cassette [1].



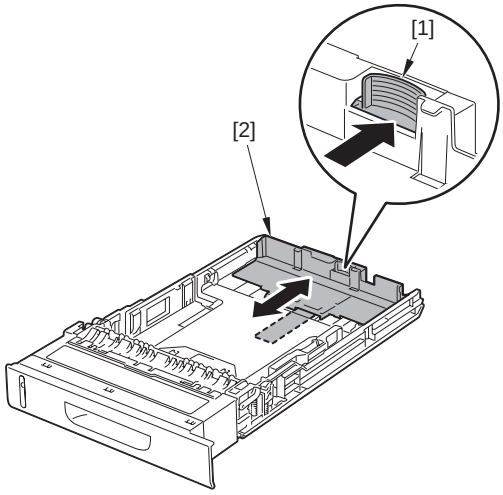
F-2-15

2) Pick the unlock lever [1] of the paper guide and adjust the paper guide [2] to the required paper size.



F-2-16

3) Pick the paper guide unlock lever [1] and adjust the paper guide [2] to the required paper size.



F-2-17

4) After loading the paper on the cassette, close the cassette.

2.2.6 Points to Note When Turning OFF Host Machine

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

NOTE:
Since this machine is not equipped with a hard disk, the main power can be turned off without shutdown sequence.

2.2.7 Connecting Cables

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Connect the host machine's power plug into the outlet.
2) Turn ON the main power switch.

2.2.8 Auto Gradation Adjustment

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

CAUTION:
Make sure to set a test print correctly. If a test print cannot be read correctly, the adjustments of gradation, density and color cannot be performed appropriately.

1) Open the feeder.
2) Clean the copyboard glass of the host machine.
3) Set A4 or LTR paper on the cassette. (Refer to the cassette settings.)
4) Close the feeder.
5) Specify the full adjustment in additional function mode.
[Additional Func] > [Adjustment/Cleaning] > [Auto Gradation

Correction] > [Full Correction]
6) When 'Test Print1' is displayed, press [OK].
Test Print 1 is output. (It takes approx, 3min.)
7) Follow the instruction on a control panel and set the test print 1 on the copyboard glass.
8) Close the feeder.
9) Press [OK].
Test Print 1 is read.
10) When 'Test Print 2' is displayed, press [OK].
Test Print 2 is displayed.
11) Follow the instruction on a control panel and set the test print 2 on the copyboard glass.
12) Close the feeder.
13) Press [OK].
Test Print 2 is read.
14) When the auto adjustment window is displayed, remove the test print 2 from the copyboard glass.
15) Exit [Additional Func].

2.3 Checking the Connection to the Network

2.3.1 Setting Up the Network

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

CAUTION:
Perform this item only when connecting to the network.

1) Turn OFF the main power switch.
2) Connect the network cable with the host machine to turn ON the main power switch.
3) Inform the system administrator at the installation site that the host machine installation is complete and request the network settings of the host machine.
4) When the network settings are complete, turn OFF and then ON the main power to enable the settings.

2.3.2 Procedure for Ping Operation

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

CAUTION:
Make the following setting only in the case of a user network environment is TCP/IP.

NOTE:
Check to see that the Ping setting is normally made with the Ping function.

1) Select the PING command in additional function mode.
[Additional Func] > [System Management] > [Network Settings] > [TCP/IP Settings] > [IPv4 Settings] > [PING Command]
2) Using the control panel keypad, enter the PING command and press [OK].
Enter the IP address of the connected PC in PING command.
The message to indicate presence/absence of reply from the host is displayed.

2.3.3 Checking with Remote Host Address

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

NOTE:
You can check whether the connection to the network is successful or failed by executing Ping with the remote host address. Remote host address: the IP address of the PC terminal connecting/operating with the TCP/IP network environment that connects the host machine.

1) Inform the system administrator that you will check the network connection using Ping.
2) Check the remote host address with the system administrator.
3) Enter the remote host address to Ping.
- In the case of 'Reply from the host', connection to the network is working.
- In the case of 'No reply from the host', connection to the network is not working so execute the troubleshooting in the following section.

2.3.4 Troubleshooting Network Connection

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

CAUTION:
Perform this item only when connecting the host machine to the network.

In the case of connection failure to the network, there can be the following causes:
a. The connection between the network and the main controller PCB is faulty

b. TCP/IP setting of the machine is faulty
c. There is a fault in the main controller PCB, or in the installation of the PCB
d. User network is faulty

2.3.5 Checking with Loopback Address

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

NOTE:
Because the loopback address is returned just before the main controller PCB, you can check whether the TCP/IP setting of the machine is successful or failed by executing Ping with this loopback address.

1) Enter the loopback address (127.0.0.1) to Ping.
   - In the case of 'NG', check the TCP/IP setting of the machine again, and then execute Ping again.
   - In the case of 'OK', go through the following check for local host address.

2.3.6 Checking with Local Host Address

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

NOTE:
Local host address is the IP address of the machine. Thus, you can check whether the PCB is working or faulty by executing Ping with this local host address since the reply is returned from the main controller PCB.

1) Enter the IP address of the machine to Ping.
   - In the case of 'NG', check and perform the following to execute Ping again.
     a. Faulty IP address of the machine:
     Check the IP address setting of the machine again/Check with the system administrator that the allocated IP address is valid
     b. Connection failure of the main controller PCB:
     Check the connection of the main controller PCB connector
     c. Faulty main controller PCB:
     Replace the main controller PCB
   - In the case of 'OK', the user's network environment can be the problem, so inform the status to the system administrator and ask for a measure.

2.4 Checking the Images/Operations

2.4.1 Checking Image Operation

imageRUNNER C1022 / imageRUNNER C1022i

1) Place a test chart on the copyboard glass, make a copy from each pickup inlet and check the followings.
   - Check that there is no abnormal noise generated.
   - Check the image quality in each magnification.
   - Check that the number of sheet set is properly applied.
2) Specify the additional function mode items (date, time etc.) when required by users.
3) Specify the mechanical specification settings related to users when required by users.
   - Enter the Service mode.(Main Menu > 2 > 8 > Main Menu)
   - COPIER > OPTION > USER
4) If changing a setting in service mode, turn OFF/ON the main power switch.

2.5 Installing the Card Reader

2.5.1 Notice At Installation

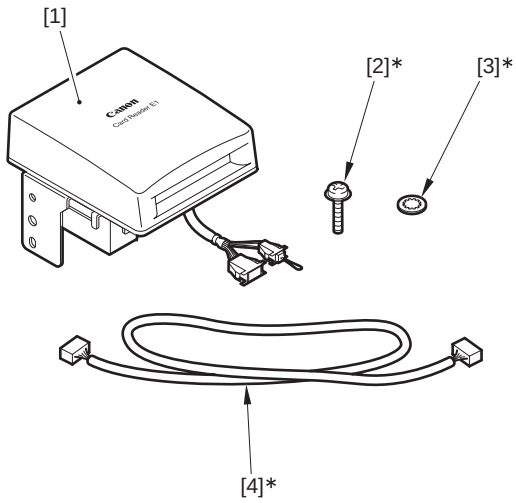
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

CAUTION:
Installation of this equipment needs 'Card Reader Attachment Kit-F1'.

2.5.2 Checking the Contents

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

< Card Reader-E1 >

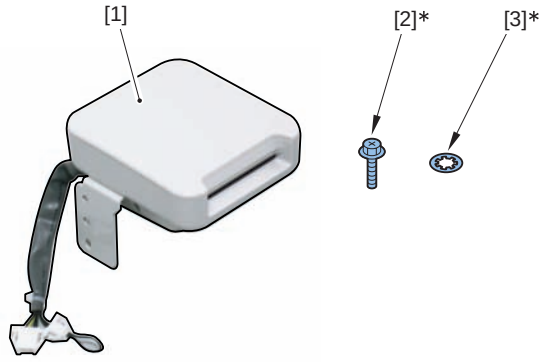


F-2-18

[1]	Card Reader	1pc
[2]*	Screw (TP; M3X12)	1pc
[3]*	Toothed washer	1pc
[4]*	IP-card reader cable	1pc

* Not used for this equipment.

< Copy Card Reader-F1 >

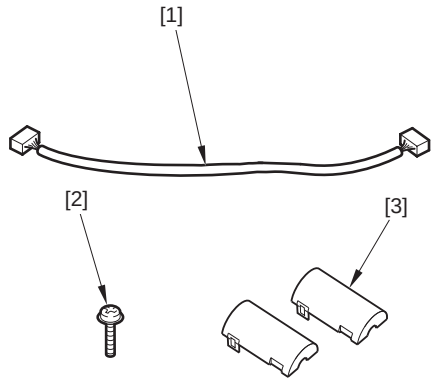


F-2-19

[1]	Card Reader	1pc
[2]*	Screw (RS tight; M4X10)	1pc
[3]*	Toothed washer	1pc

* Not used for this equipment.

< Card Reader Attachment Kit-F1 >



F-2-20

[1]	Card reader cable	1pc
[2]	Screw (TP; M4X8)	1pc
[3]	Case connector	2pc

2.5.3 Turning OFF the Power of the Host Machine

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Turn OFF the main power.
2) Remove the power plug (for outlet).

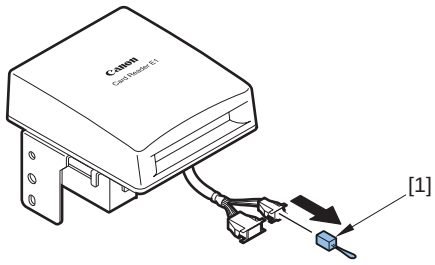
2.5.4 Installation Procedure

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

NOTE:
Although model with the Card Reader-E1 is used for illustration in this procedure, the same procedure is applied to model with the Copy Card Reader-F1.

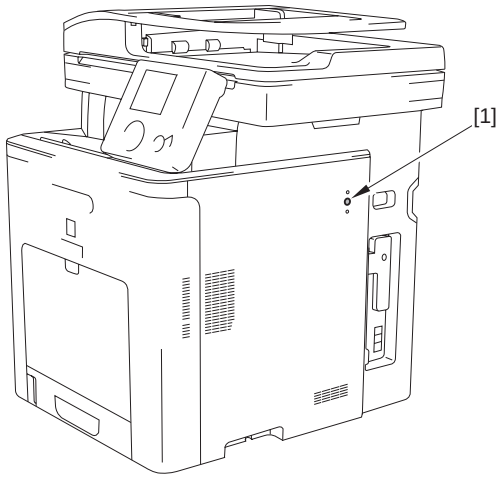
1) When installing the Card Reader-E1, remove the jumper [1] from the connector of the Card Reader Unit. (The removed jumper will not be used.)

CAUTION:
In the case of Copy Card Reader-F1, do not remove the jumper [1].



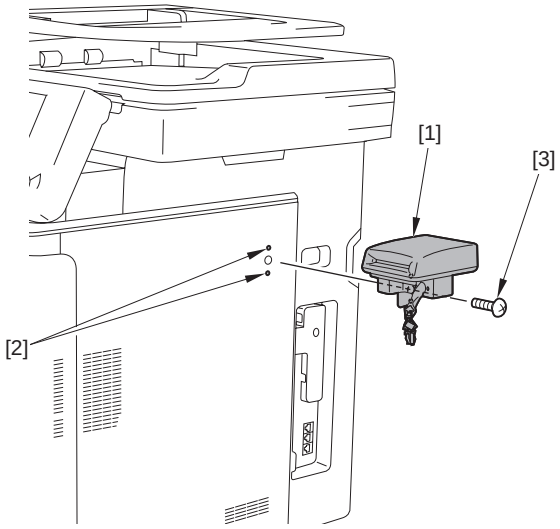
F-2-21

2) Remove the face seal [1] at the right side of the host machine. (The removed face seal is not used.)



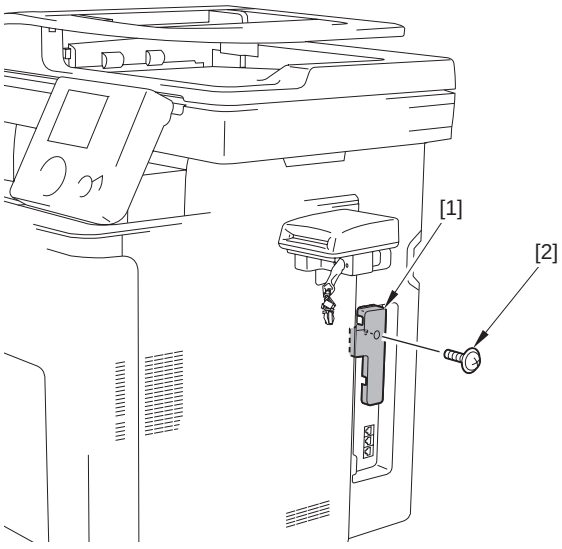
F-2-22

3) Install the card reader [1].
- 2 embosses [2]
- 1 screw (TP; M4X8) [3]



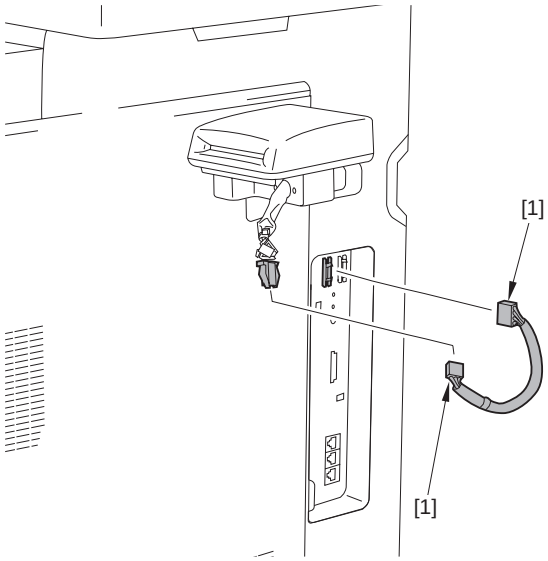
F-2-23

4) Remove the panel mount cover [1].
- 1 screw [2]



F-2-24

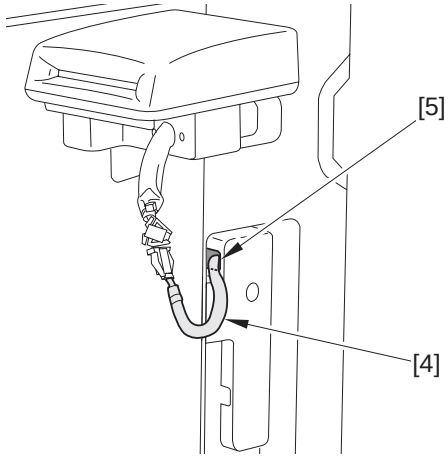
5) Install the 2 connectors [1] of the card reader cable.

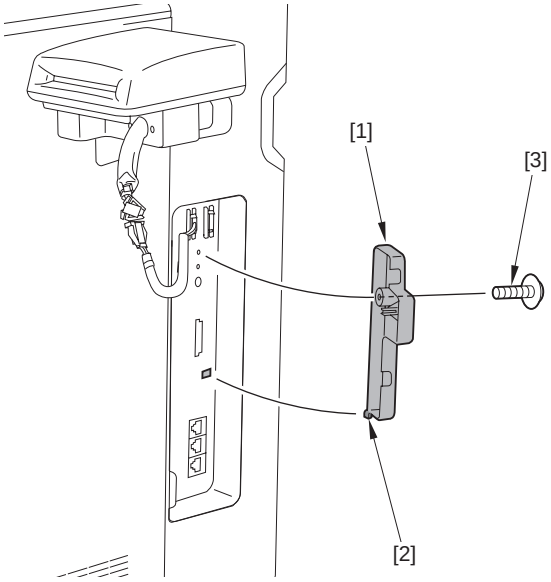


F-2-25

6) Install the panel mount cover [1] removed in step 4.
- 1 claw [2]
- 1 screw [3] (The screw removed in step 4 is used.)

CAUTION:
Be sure to route the card reader cable [4] through the cut-off [5] of the panel mount cover to prevent the cable from being caught.

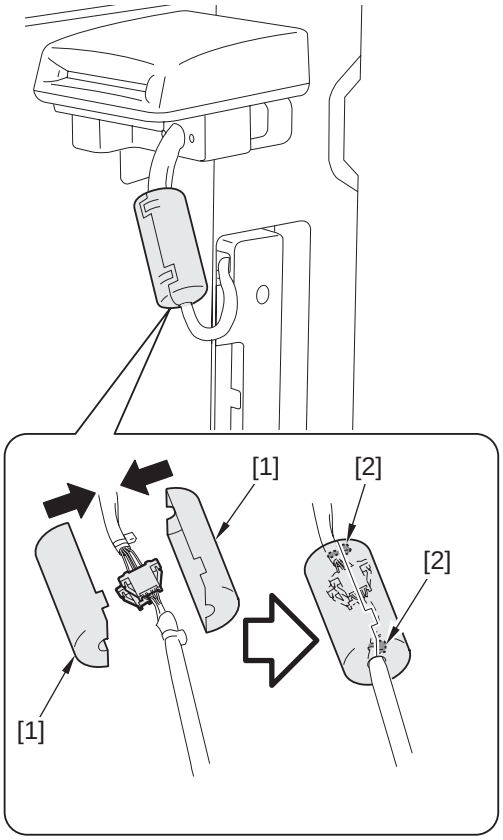




F-2-26

7) Install the 2 case connectors [1].

CAUTION:
When installing the case connectors, be sure to place the tie-wraps [2] inside of the case connectors [1].



F-2-27

2.5.5 Card ID Registration

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

CAUTION:
Be sure to enter the card number to use in service mode of the host machine after installing the Card Reader. If the number is not entered, the card is not recognized when being inserted.

NOTE:
When "System Manager Information Settings" is set, be sure to follow the direction of user administrator in order to log in as an administrator.

1) Connect the power plug to the power outlet and turn on the main power switch.
2) Specify the first number of the card ID to register.
   - COPIER > OPTION > ACC > CARD
   - The serial numbers beginning the specified one are automatically registered in Dept. ID for 1000 cards.
   - Exit service mode after registration.
3)-1. Select the following; [Additional Func.] > [System Management Set.] > [Dept. ID Management] > ON, and press the OK key.

NOTE:
Implement the procedure below to check the registration although card ID registration is complete by performing step 1 to 3.

3)-2. Press 'Back' key or 'Done' key to display the [System Mgmt. Dept. ID and Password] screen.
3)-3. Select [System Mgmt. Dept. ID:], press the OK key, enter the numeric characters registered in step 2, and then press the OK key.

3)-4. Press [ID] key when [System Mgmt. Password] is displayed.
- When the registration is complete, the display automatically returns to the main screen.

4) Turn off and then on the main power switch.
5) Check to see that 'Set the control card' is displayed.

2.5.6 Installation Procedure in the imageWARE Accounting Manager (hereinafter referred to iWAM) Environment

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Select "ON" in [Additional Func.] > [System Management Set.] > [Dept. ID Management] and press [Set] key.
   Check to see that "0000001 to 0001000" has been created in [Register Dept. ID/Pass.]. (In the case that "1" is entered as the first number in the following item: Service Mode > COPIER > OPTION > ACC > CARD.)
2) Press 'Back' key or 'Done' key to exit [Additional Func.].
3) Make the setting for network in [Additional Func.] > [System Management Set.] > [Network Settings] > [TCP/IP Settings] > [IPv4 Settings] > [IP Address Settings].

NOTE:
Pressing [Network Settings] displays the following message. Press [Done] key to exit the screen that displays this message.
[Changes become effective after the main power switch is turned OFF and ON again.]

   - In the case of [Manual Settings], make the setting of [IP Address], [Subnet Mask], [Gateway Address] according to the environment of user.
   - In the case of [Obtain Automatically], select either of the following; [DHCP], [BOOTP], [RARP].
4) Press 'Back' key or 'Done' key to exit [Additional Func.].
5) Turn off and then on the main power switch.
6) Enter a number for [System Mgmt. Dept. ID] and [System Mgmt. Password] in [Additional Func.] > [System Management Set.] > [System Manager Info. Set.], and then press [Register] key.

CAUTION:
Note that 'Registration of card to the device' cannot be executed in setting of iWAM unless [Additional Func.] > [System Management Set.] > [System Manager Info. Set.] is selected and [System Mgmt. Dept. ID] and [System Mgmt. Password] are registered.

7) Press 'Back' key or 'Done' key to exit [Additional Func.].

2.6 Installing the Hand Set

2.6.1 Points to Note At Installation

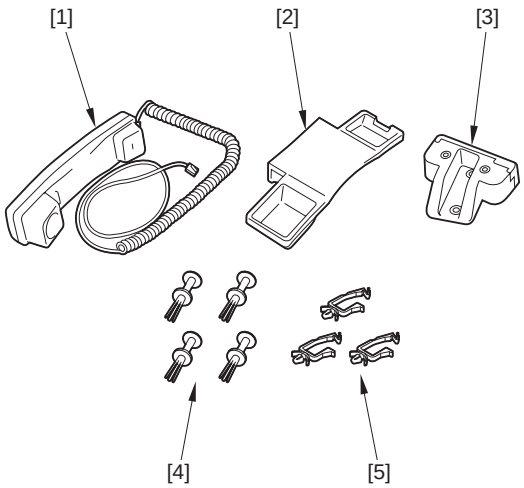
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

CAUTION:
When installing this equipment, make sure that the FAX board is installed first.

2.6.2 Checking the Contents

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<Handset-J1>



F-2-28

[1]	Handset	1pc
[2]	Handset rest	1pc
[3]	Handset adapter	1pc
[4]	Plasti rivet	4pc
[5]	Wire saddle	3pc

2.6.3 Turning OFF the Power of the Host Machine

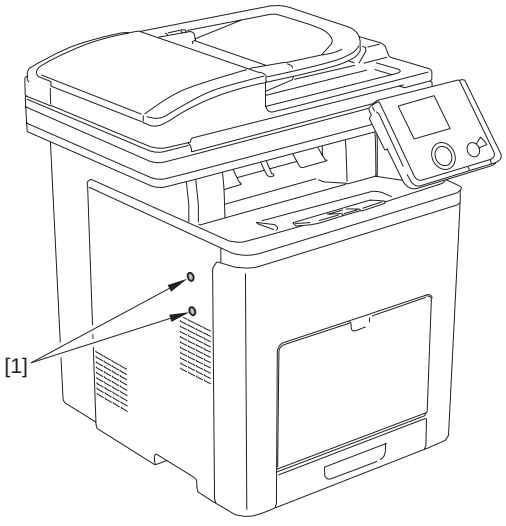
imageRUNNER C1022 / imageRUNNER C1022i

1) Turn OFF the main power.
2) Remove the power plug (for outlet).

2.6.4 Installation Procedure

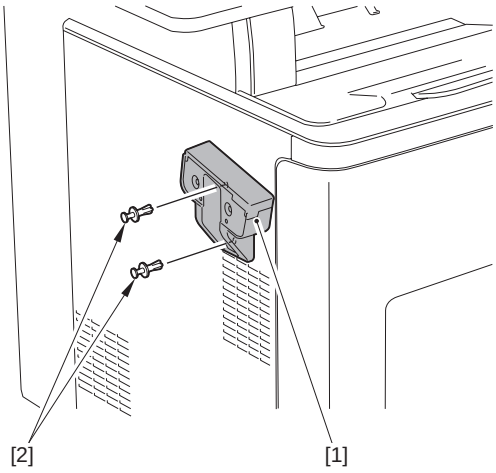
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the 2 face seals [1]. (The removed face seals are not used.)



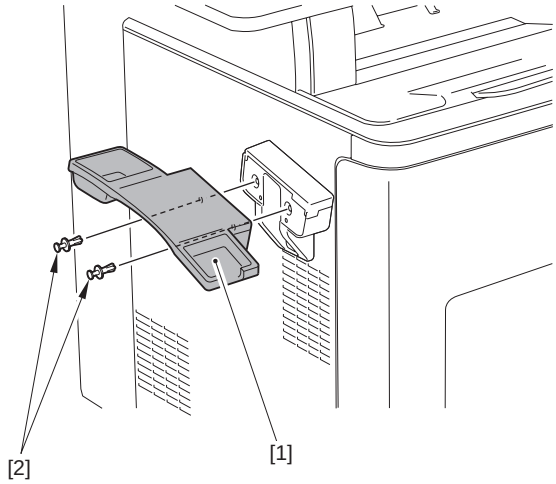
F-2-29

2) Install the handset adapter [1].
   - 2 plasti rivets [2]



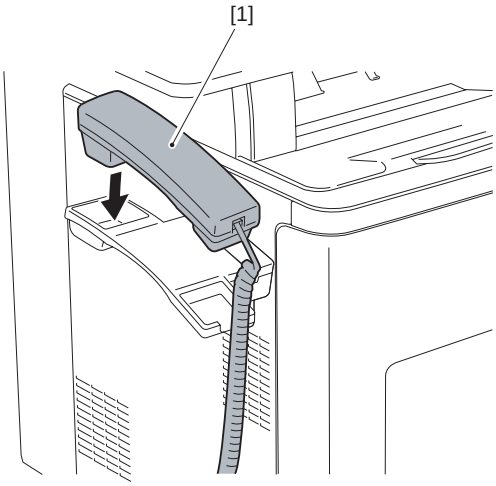
F-2-30

3) Install the handset rest [1].
- 2 plasti rivets [2]



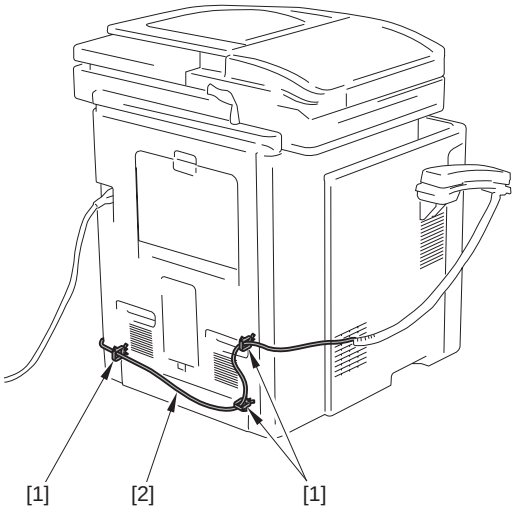
F-2-31

4) Put the handset [1] on the handset rest.



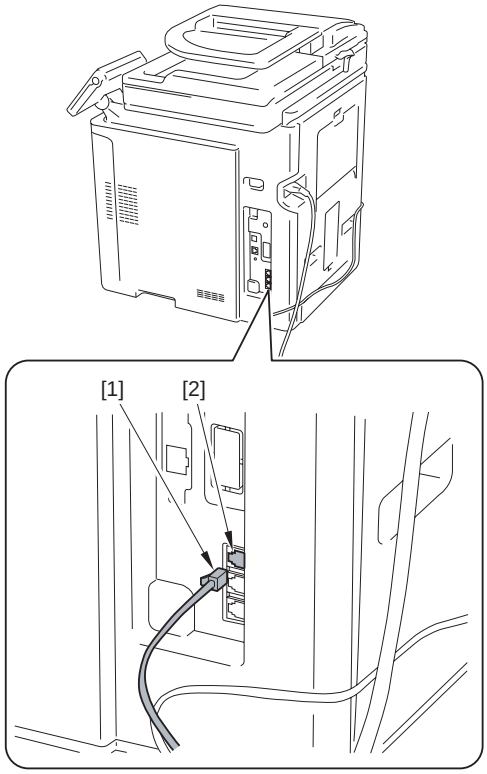
F-2-32

5) Install the 3 wire saddles [1] and secure the route cord part [2] of the hand set with the 3 wire saddles [1].



F-2-33

6) Connect the terminal [1] of the cord to the modular terminal "☎"[2]of the host machine.



F-2-34

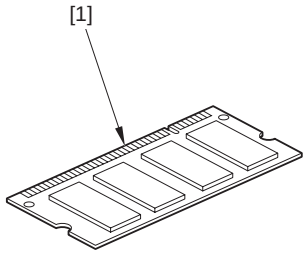
7) Turn on the main power switch.
8) Check that you can hear the dial tone through the handset.

2.7 Installing the Memory

2.7.1 Checking the Contents

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<System Upgrade RAM-A1>



F-2-35

[1] Expansion memory 1pc.

2.7.2 Checking Before Memory Expansion

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Enter service mode and output the spec report.
   COPIER > FUNCTION > MISC-P > OUTPUT > SPEC
2) Check the memory capacity before installing the extension RAM with 'TOTAL MEMORY' of the spec report.
3) Exit service mode.

2.7.3 Turning OFF the Power of the Host Machine

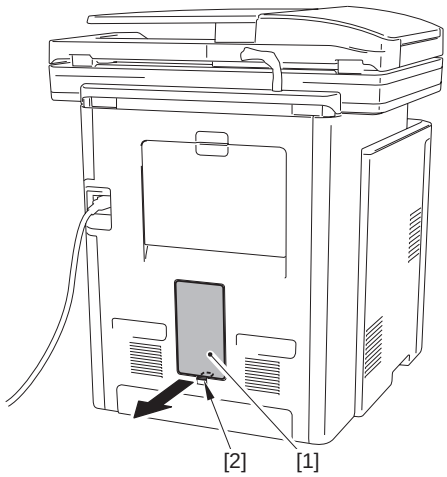
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Turn OFF the main power.
2) Remove the power plug (for outlet).

2.7.4 Installation Procedure

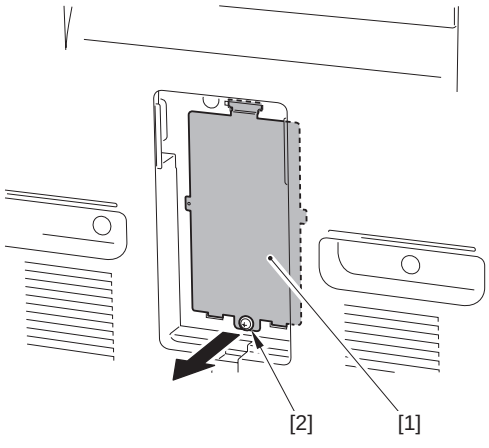
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the cover plate [1] at the rear cover.
   - 1 claw [2]



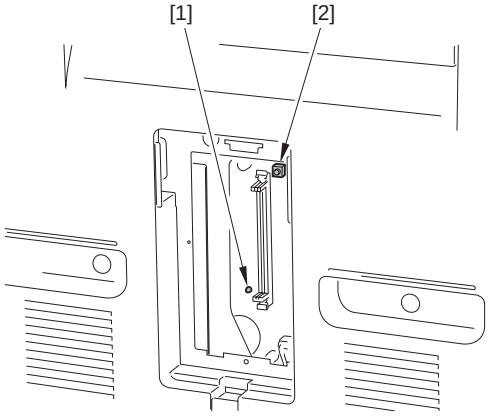
F-2-36

2) Remove the face plate [1].
   - 1 screw [2]



F-2-37

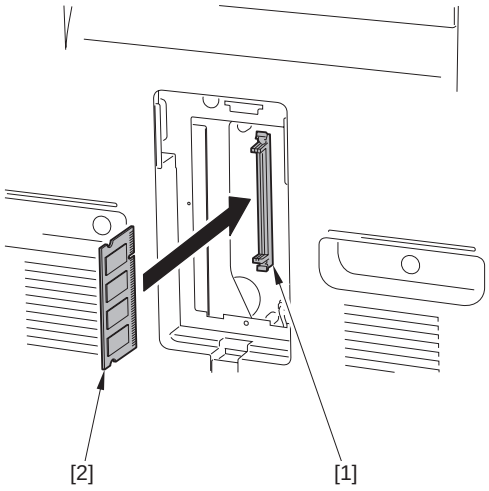
3) In the case that the LED [1] at the main controller PCB is turned on, press the SW3 [2] to turn off the LED [1].



F-2-38

CAUTION:
Be sure to install the extension RAM after checking that the LED is turned off.
When the LED is turned on, the backup battery works. If installing the extension RAM with the LED turned on, the main controller PCB and the extension RAM may be broken.

4) Install the expansion RAM [2] on the DIMM stopper [1] on the main controller PCB.



F-2-39

5) Install the face plate and the cover plate of the rear cover.
6) Insert the power plug into the power outlet.
7) Turn on the main power switch.

2.7.5 Checking After Memory Expansion

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Enter service mode and output the spec report.
   COPIER > FUNCTION > MISC-P > OUTPUT > SPEC
2) Check that the memory capacity is increased after installing the extension RAM with 'TOTAL MEMORY' of the spec report.
3) Exit service mode.

Chapter 3 Basic Operation

Contents

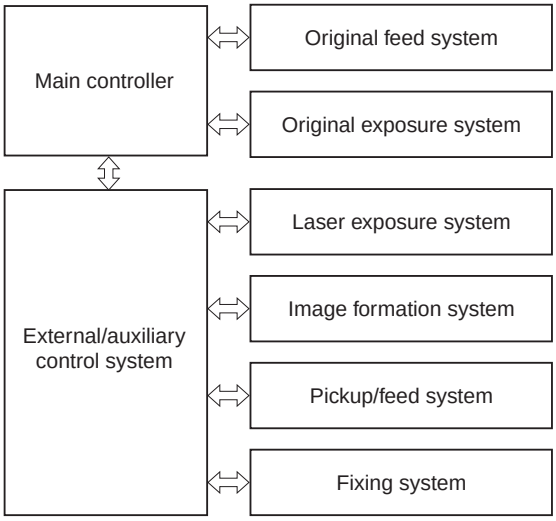
3.1 Construction 3-1
3.1.1 Functional Configuration 3-1
3.1.2 Connecting the Main PCBs 3-2
3.2 Basic Sequence 3-3
3.2.1 Basic Sequence of Operation 3-3
3.2.2 Power-On Sequence 3-4

3.1 Construction

3.1.1 Functional Configuration

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

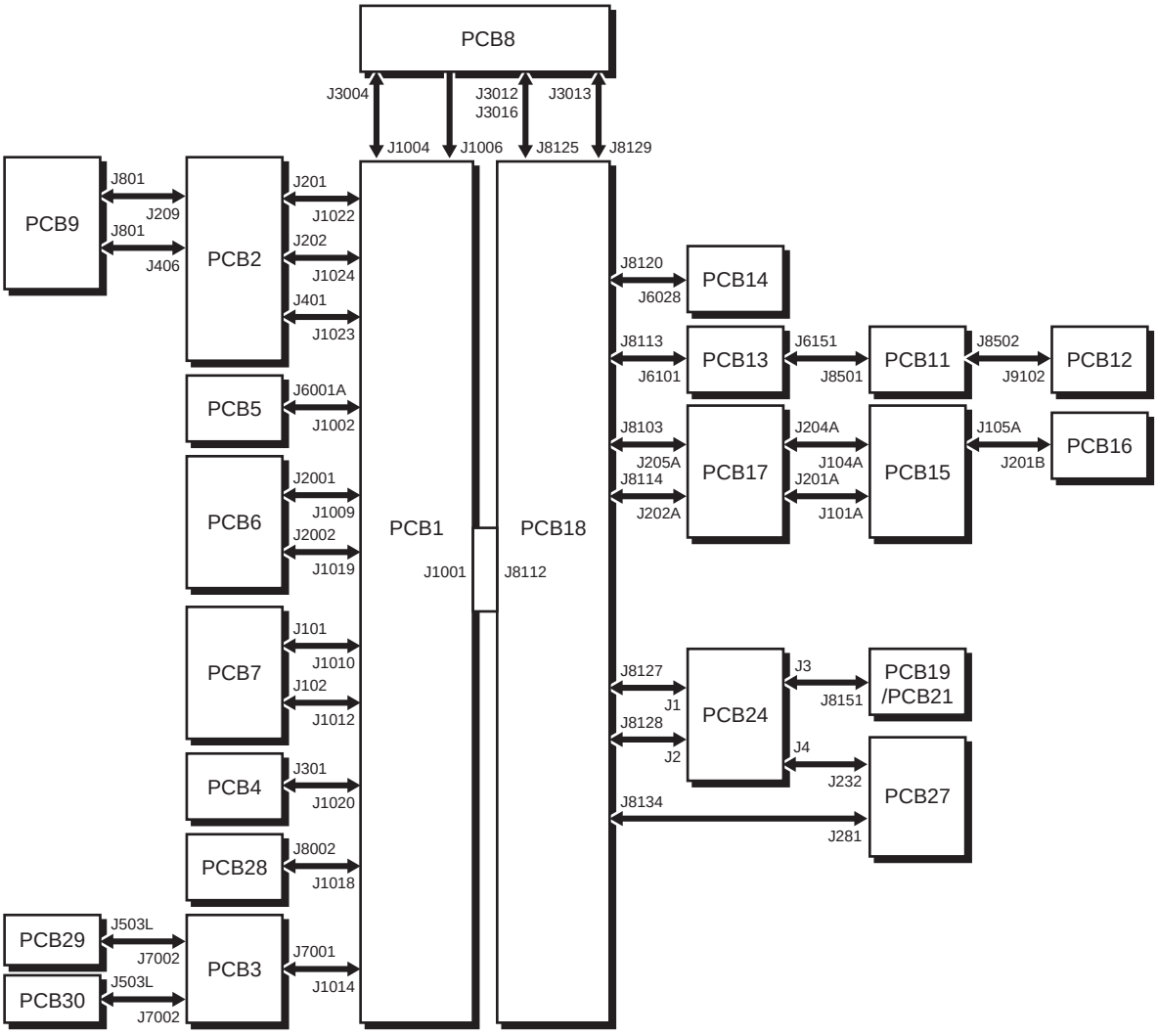
This machine's functions are divided into 8 blocks.



F-3-1

3.1.2 Connecting the Main PCBs

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-3-2

PCB1:	DC controller PCB	PCB2:	Driver PCB
PCB3:	Pickup relay PCB	PCB4:	Memory controller PCB
PCB5:	Fixing relay PCB	PCB6:	High-voltage power PCB
PCB7:	Laser driver PCB	PCB8:	Low-voltage power PCB
PCB9:	Reverse driver PCB	PCB11:	CCD PCB
PCB12:	Inverter PCB	PCB13:	CCD relay PCB
PCB14:	ADF relay PCB	PCB15:	Control panel main PCB
PCB16:	Control panel jog PCB	PCB17:	Control panel relay PCB
PCB18:	Main controller PCB	PCB19:	Modular PCB
PCB24:	NCU PCB	PCB21:	Modular PCB
PCB27:	Off hook PCB	PCB28:	Environment sensor
PCB29:	Color displacement/density sensor (right)	PCB30:	Color displacement/density sensor (left)

3.2 Basic Sequence

3.2.1 Basic Sequence of Operation

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The operational sequence of a printer is controlled by the microcomputer (CPU) on the DC controller.
The purposes of each period, from power-ON until the inverter motor stops after the completion of printing, are listed below.

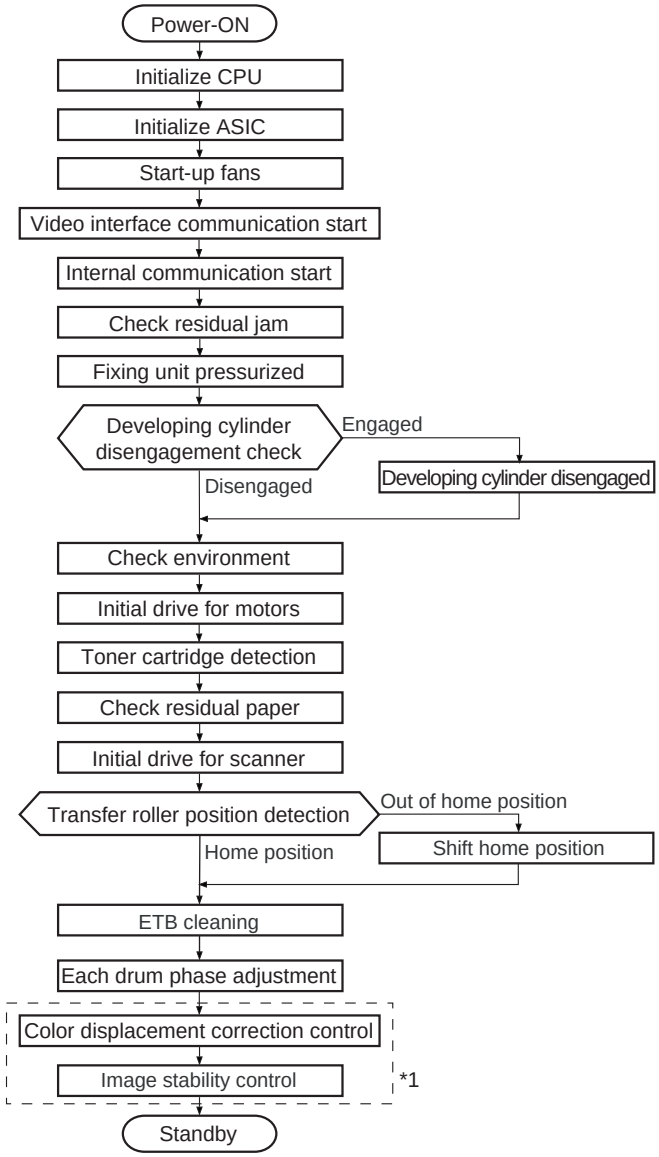
T-3-1

Operation	Interval	Description	Remarks
WAIT (Wait)	From either power switch is turned ON or front cover is closed until each drum phase adjustment is completed.	To clear drum surface potential, to adjust each drum phase, and to clean the ETB.	The machine detects the toner level, cartridge presence, new cartridge, and environmental status during the period. It also executes the calibration (color displacement correction and image stability control) as required.
STBY (Stand-by)	From end of WAIT or LSTR period until either the print command is input from the main controller or power switch is turned OFF.	To keep the machine ready to print.	The machine goes into sleep mode when a sleep command is sent from the main controller. It executes the color displacement correction and the image stability control when each command is sent.
INTR (Initial rotation)	From the print command is input by the main controller until paper is picked up.	To stabilize the photosensitive drum sensitivity in preparation for printing.	
PRINT (Print)	From /TOP signal is sent to the main controller after INTR period until the fixing delivery sensor detects trailing edge of paper.	To form image on the photosensitive drum based on the video signals sent from the main controller and to transfer the toner image onto paper.	The printer executes the image stabilization control in every specified number of prints or specified time elapsed after the power is turned ON.
LSTR (Last rotation)	From the end of PRINT period until the inverter motor stops.	To deliver the last paper out of the machine.	The machine returns to the INTR period as soon as another print command is sent from the main controller.

3.2.2 Power-On Sequence

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Power-on sequence is to reset the machine's status and to check that there is no JAM or failure.
The sequences from power-ON until the stand-by status are as below.



F-3-3

*1 Items surrounding with dotted line are functioning only when needed.

Chapter 4 Main Controller

Contents

4.1 Overview/Configuration 4-1
4.1.1 Overview 4-1
4.1.2 Configurations/functions 4-2
4.2 Set-Up Sequence 4-4
4.2.1 Overview 4-4
4.2.2 Startup Sequence 4-5
4.3 Image Processing 4-6
4.3.1 Overview of the Image Flow 4-6
4.3.2 Construction of the Image Processing Module 4-6
4.3.3 Reader Unit Input Image Processing 4-7
4.3.4 Compression/ Extesion/ Editing Block 4-7
4.3.5 Printer unit Output Image Processing 4-8
4.4 Image Data Flow 4-9
4.4.1 Flow of Image Data According to Copy Functions 4-9
4.4.2 Flow of Image Data for the SEND Function 4-10
4.4.3 Flow of Image Data for the Fax Transmission 4-10
4.4.4 Flow of Image Data for the Fax Reception Function 4-11
4.4.5 Flow of Image Data for the PDL Function 4-11
4.5 Parts Replacement Procedure 4-12
4.5.1 Main Controller PCB 4-12
4.5.1.1 Before Removing the Main Controller PCB 4-12
4.5.1.2 Removing the Main Controller PCB 4-12
4.5.1.3 Procedure after Replacing the Main Controller PCB 4-12

4.1 Overview/Configuration

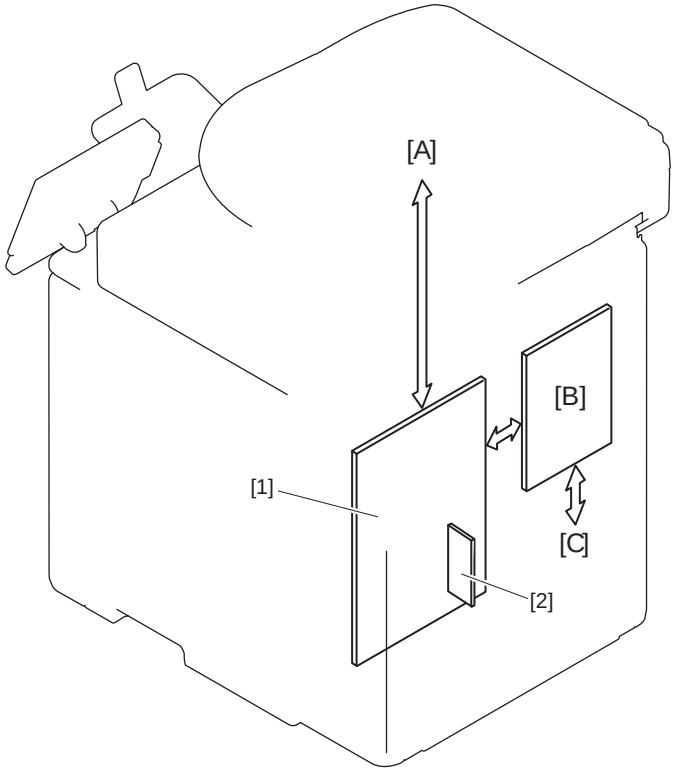
4.1.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine's main controller mainly consists of the following parts.

T-4-1

No.	PCB Name	Function
[1]	Main controller PCB	System control, memory control, image processing control, interface control
[2]	Extended RAM DIMM	Memory for image storage Memory for work (image processing and data analysis, etc.)

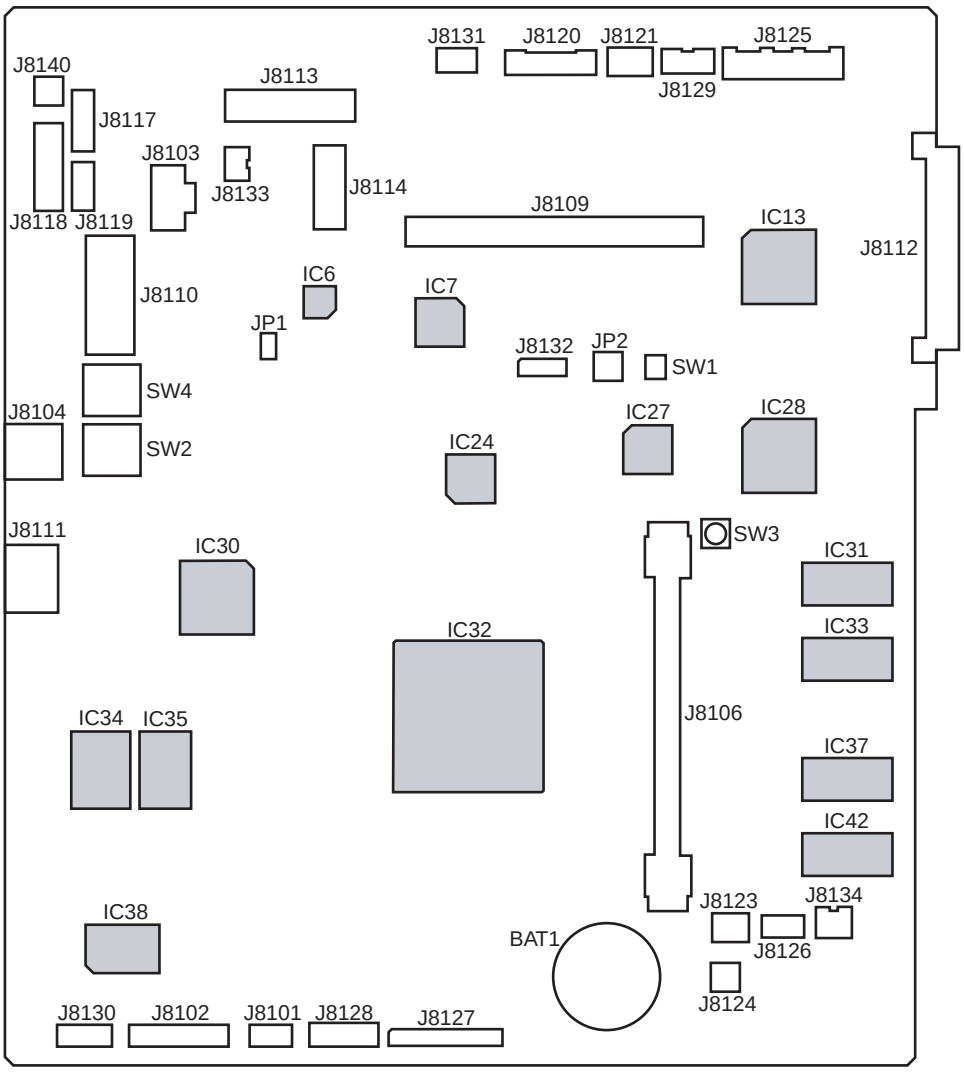


F-4-1

[A] Reader unit
[B] DC controller PCB
[C] Printer unit

4.1.2 Configurations/functions

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-4-2

T-4-2

IC	Function
IC6	Control panel screen transfer
IC7, IC27	Read image process
IC13, IC28	Record image process
IC24	Universal port
IC30	Ethernet controller
IC31, IC33, IC37, IC42	DDR SDRAM (main memory)
IC32	Main CPU, main image process
IC34	BOOT ROM
IC35	Main program ROM
IC38	FAX modem

T-4-3

Jack No.	Function	Connect to
J8101	Serial interface for debug	-
J8102	Not implemented	-
J8103	USB on a control panel, Connect to a media card reader	Control panel relay PCB
J8104	USB device connector	USB device
J8106	RAM DIMM connector	RAM DIMM for expansion
J8109	SRAM connector for debug	-
J8110	On-board SD card interface	SD card
J8111	LAN connector	LAN
J8112	Video signal, engine command	DC controller PCB
J8113	CCD read image signal, lamp power/control signal	CCD relay PCB
J8114	Control panel screen image signal, key signal	Control panel relay PCB
J8117	CCVI interface	CC-VI
J8118	Serial interface	Coin vendor (100V, 230V) Serial I/F PCB (120V)
J8119	Card reader interface	Card reader-E1
J8120	Motor for ADF, solenoid, sensor signal	ADF relay PCB
J8121	Reader motor control signal	Reader motor (M12)
J8123	Not implemented	-
J8124	Secondary battery for memory backup	Secondary battery
J8125	Power source	Low-voltage power PCB
J8126	Pseudo CI signal	Pseudo CI PCB
J8127	NCU control signal (digital)	NCU PCB
J8128	NCU control signal (analog)	NCU PCB
J8129	Power control signal	Low-voltage power PCB
J8130	Not implemented	-
J8131	CCD unit HP signal	Reader HP sensor (SR717)
J8132	For debug	-
J8133	Front cover open/close detection signal	Front cover sensor (SR720)
J8134	Power for pseudo CI	Pseudo CI PCB/off hook PCB
J8140	Power for serial I/F	Serial I/F PCB

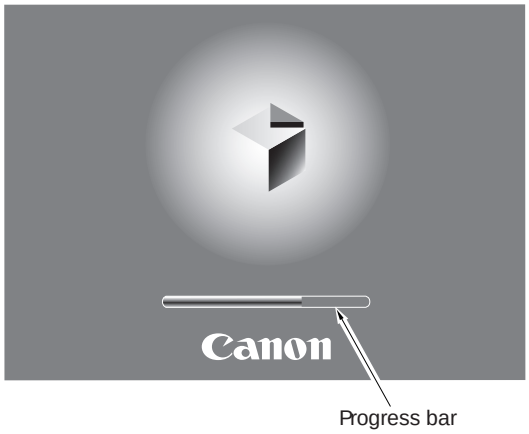
4.2 Set-Up Sequence

4.2.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The system software controlling the machine is stored in the main program ROM in the main controller PCB.

At the time of startup, the CPU reads the system software from the main program ROM into the main memory (DDR-SDRAM) according to the boot program in the BOOT ROM.
While the CPU is reading the system software and initializing memory, etc., the following screen is displayed in the control panel, where the progress status is displayed in the progress bar.



F-4-3

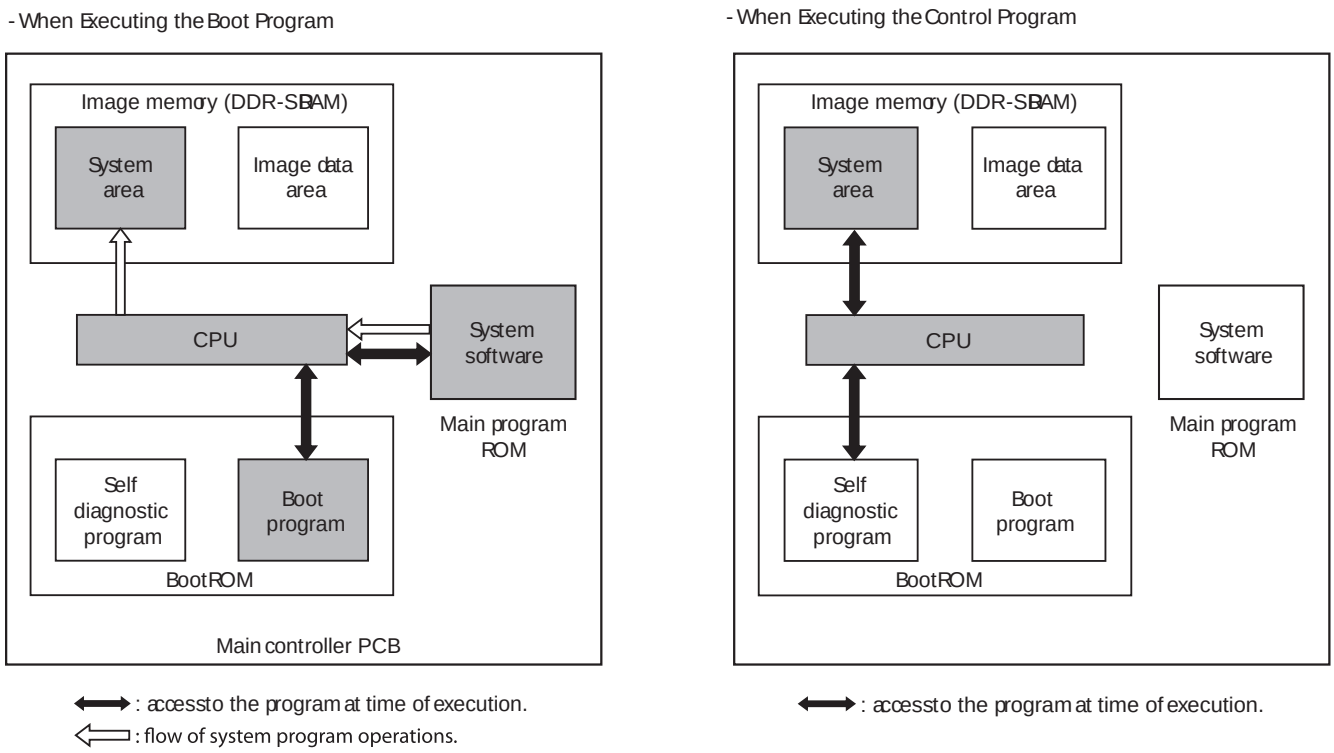
4.2.2 Startup Sequence

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1. Boot Program
Executed by the CPU in the main controller PCB when the main power switch is turned on.
Check the status of the image memory (DDR-SDRAM).
Load the control program from the main program ROM to the memory if the status is normal.
Display an error code when a fault is detected.

2. Control Program 1
1) Perform checking and initialization of each device (each hardware device in the main controller PCB).
2) Perform recovery of the system file as necessary when the previous shutdown was not executed normally.
In this case, it takes longer time than a normal case to start up the program.
3) Initialize each program module.

3. Control Program 2
1) Perform initialization of each software module and communication with a printer.
2) When the printer is detected normally, the startup sequence is completed.
If it is not detected normally, an error code "E197" is displayed after a connection timeout occurs.



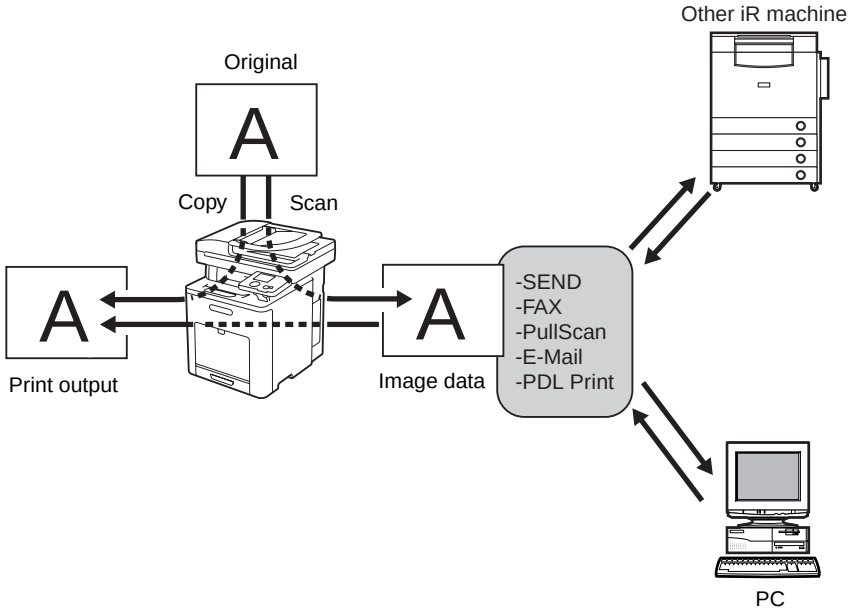
F-4-4

When the startup sequence is completed, it becomes possible to receive a job. (The operation screen is displayed in the control panel, and the color of the LED of the start key is changed from red to green.)

4.3 Image Processing

4.3.1 Overview of the Image Flow

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

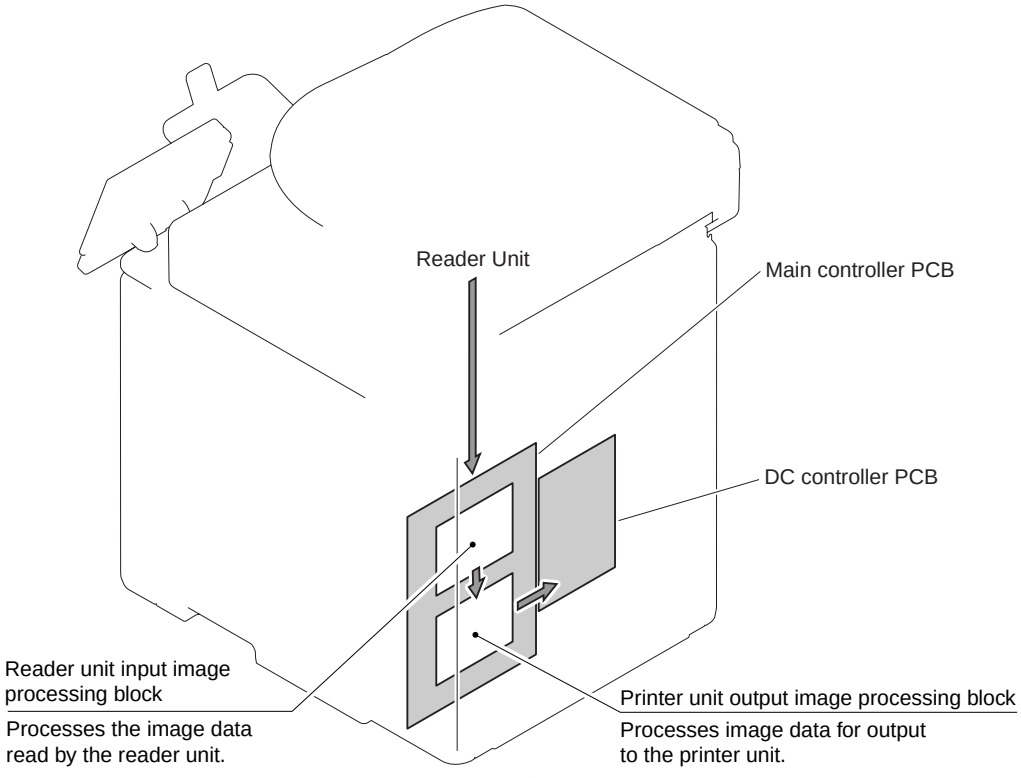


F-4-5

4.3.2 Construction of the Image Processing Module

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Image processing is mainly executed by the main controller PCB.
The configuration of related modules is shown below.

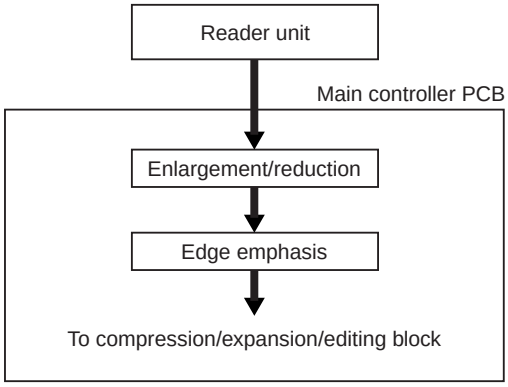


F-4-6

4.3.3 Reader Unit Input Image Processing

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The main controller PCB performs image processing to the image data read by the CCD.

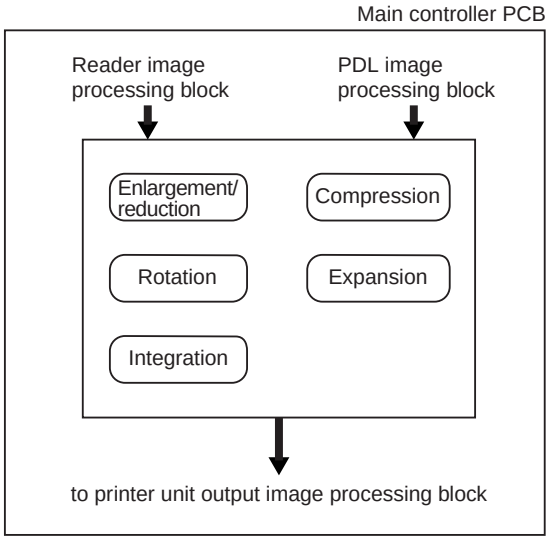


F-4-7

4.3.4 Compression/ Extesion/ Editing Block

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

In this processing, compression/extension/editing are performed.

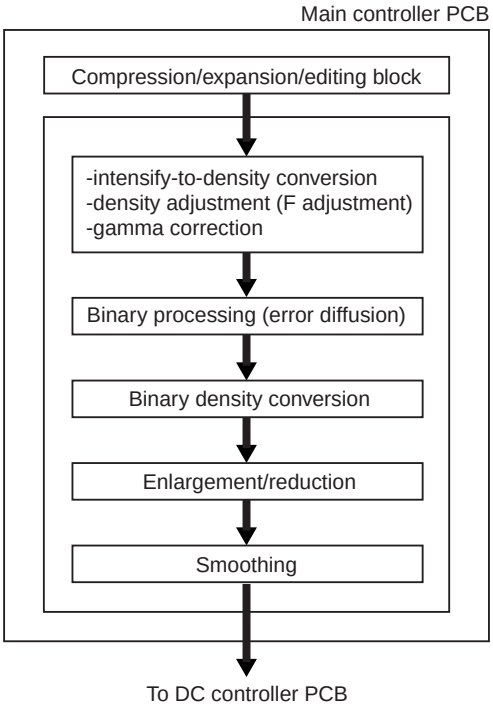


F-4-8

4.3.5 Printer unit Output Image Processing

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The main controller PCB performs image processing to perform printing to the image data received from the reader unit.

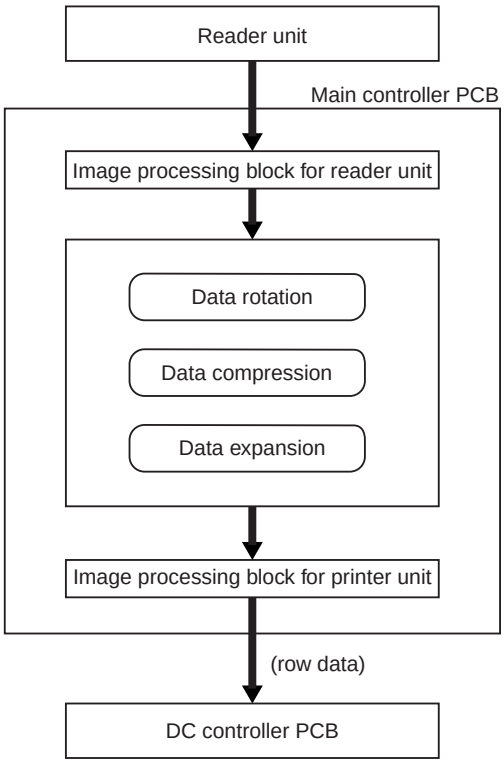


F-4-9

4.4 Image Data Flow

4.4.1 Flow of Image Data According to Copy Functions

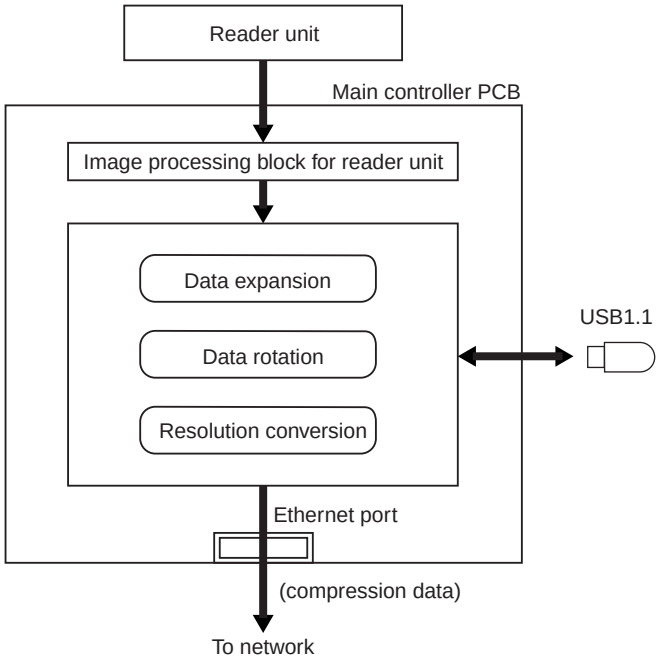
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-4-10

4.4.2 Flow of Image Data for the SEND Function

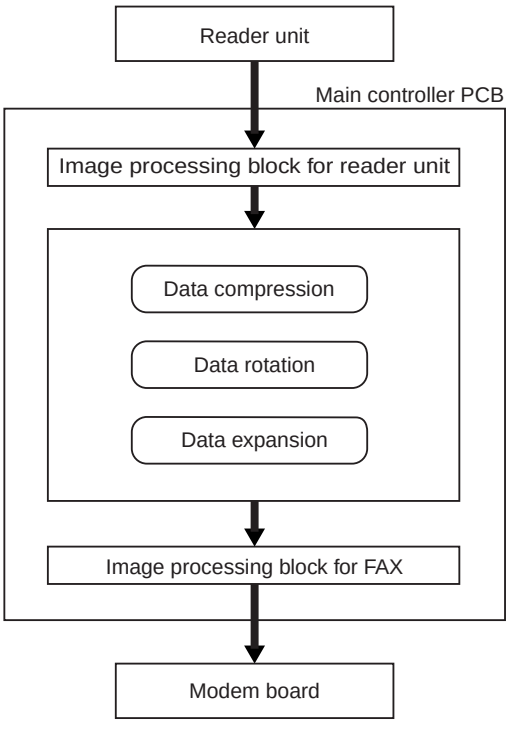
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-4-11

4.4.3 Flow of Image Data for the Fax Transmission

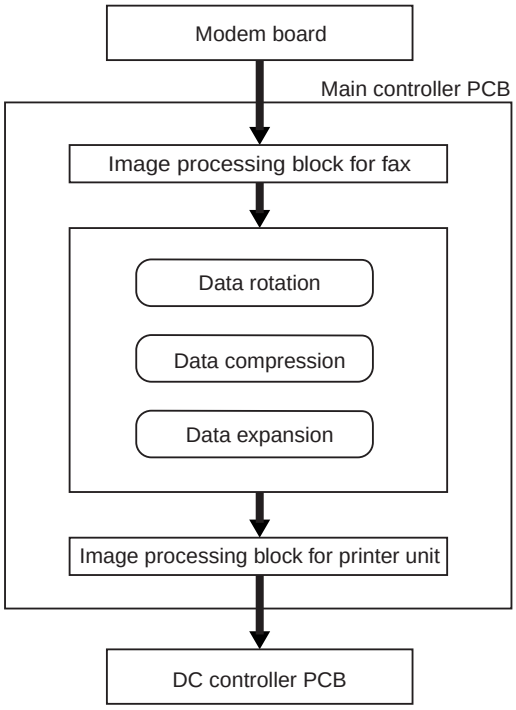
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-4-12

4.4.4 Flow of Image Data for the Fax Reception Function

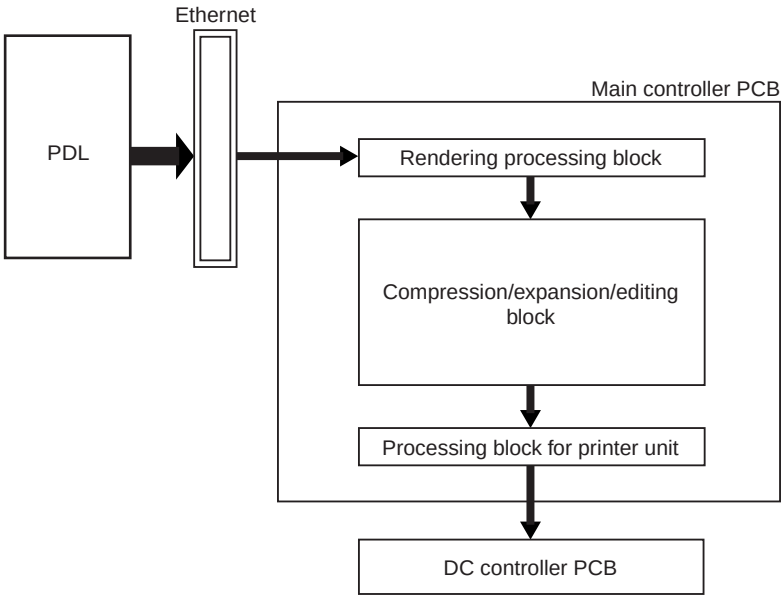
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-4-13

4.4.5 Flow of Image Data for the PDL Function

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-4-14

4.5 Parts Replacement Procedure

4.5.1 Main Controller PCB

4.5.1.1 Before Removing the Main Controller PCB

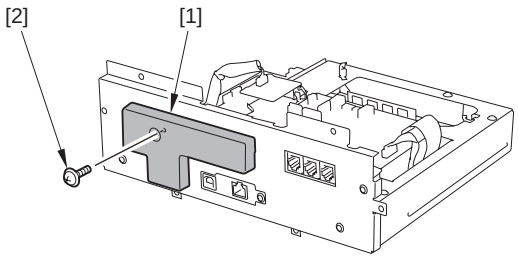
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
3) Remove the left cover.(page 11-14) Reference [Removing the Left Cover]
4) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]
5) Remove the Electrical Components Cover.(page 11-16) Reference [Removing the Electrical Components Cover]
6) Remove the Controller Box.(page 11-16) Reference [Removing the Controller Box]

4.5.1.2 Removing the Main Controller PCB

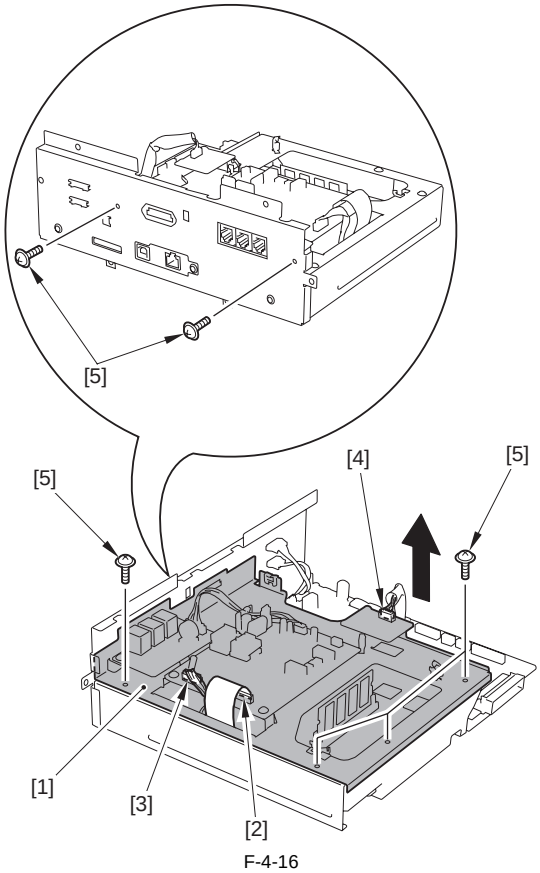
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the face cover [1].
   - 1 screw [2]



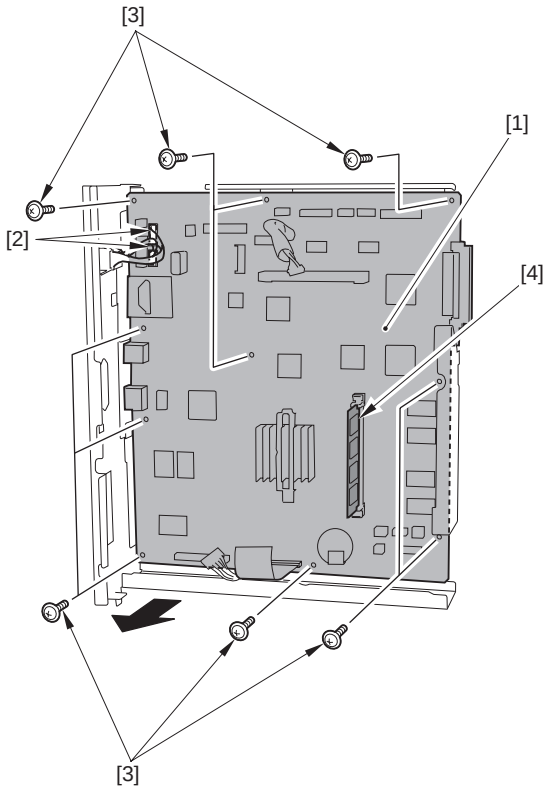
F-4-15

2) Remove the NCU frame [1].
   - 1 flat cable [2] (only of the machine with FAX)
   - 1 connectors [3] (only of the machine with FAX)
   - 1 connectors [4]
   - 6 screws [5]



F-4-16

3) Remove the Main controller PCB [1].
   - 2 connectors [2]
   - 10 screws [3]



F-4-17

T-4-4

Points to Note When Replacing the Main Controller
- If the RAM [4] is installed in the main controller PCB, remove it.
- If a RAM is not installed in the new main controller, install the removed RAM [4].

4.5.1.3 Procedure after Replacing the Main Controller PCB

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

After replacing the main controller PCB with new one, perform the following procedure.

1. Backup the user data
Import the user data using the remote UI.

The machine does not support "Import/export via USB" (provided in the following service SW) because it supports network as standard function.
COPIER->FUNCTION->PARAM->SYS-SW->Bit Switch->SW 02 Bit6

2. Enter the flicker adjustment value of the control panel
1) Using the service mode, check the flicker value of the control panel.
   TESTMODE> PANEL> FLICKER CHECK START> FLICKER ADJUST

MEMO:
The flicker adjustment value can be also checked in the spec list (FLICKER ADJ PRM).
How to output the spec list: COPIER> FUNCTION> MISC-P> OUTPUT> SPEC

2) Replace the main controller PCB.
3) Using the service mode, enter the adjustment value checked in Step 1).
   TESTMODE> PANEL> FLICKER CHECK START> FLICKER ADJUST
4) Using the user mode, execute automatic gradation correction (full correction).
   Initial Setting/Registration> Adjustment/Cleaning> Automatic Gradation Correction> Full Correction

Chapter 5 Original Exposure System

Contents

5.1 Basic Construction 5-1
5.1.1 Overview 5-1
5.1.2 Major Components 5-1
5.2 Basic Sequence 5-3
5.2.1 Basic Sequence of Operation at Power-on 5-3
5.2.2 Basic Sequence of Operation in Response to a Press on the Start Key (book) 5-4
5.2.3 Basic Sequence of Operation in Response to a Press on the Start Key (book) 5-5
5.3 Various Control 5-6
5.3.1 Lamp Control 5-6
5.3.1.1 Overview 5-6
5.3.2 Enlargement/Reduction 5-7
5.3.2.1 Overview 5-7
5.3.3 Detecting the Size of Originals 5-7
5.3.3.1 Overview 5-7
5.3.4 Dirt Sensor Control 5-8
5.3.4.1 Overview 5-8
5.3.4.2 Stream Reading Position Shift 5-8
5.4 Parts Replacement Procedure 5-9
5.4.1 ADF Unit + Reader Unit 5-9
5.4.1.1 Before Removing the ADF Unit + Reader Unit 5-9
5.4.1.2 Removing the ADF Unit + Reader Unit 5-9
5.4.1.3 Procedure after Replacing the ADF Unit 5-11
5.4.1.4 Procedure after Replacing the Reader Unit 5-11
5.4.2 Reader Unit 5-11
5.4.2.1 Before Removing the Reader Unit 5-11
5.4.2.2 Removing the Reader Unit 5-11
5.4.2.3 Procedure after Replacing the Reader Unit 5-12

5.1 Basic Construction

5.1.1 Overview

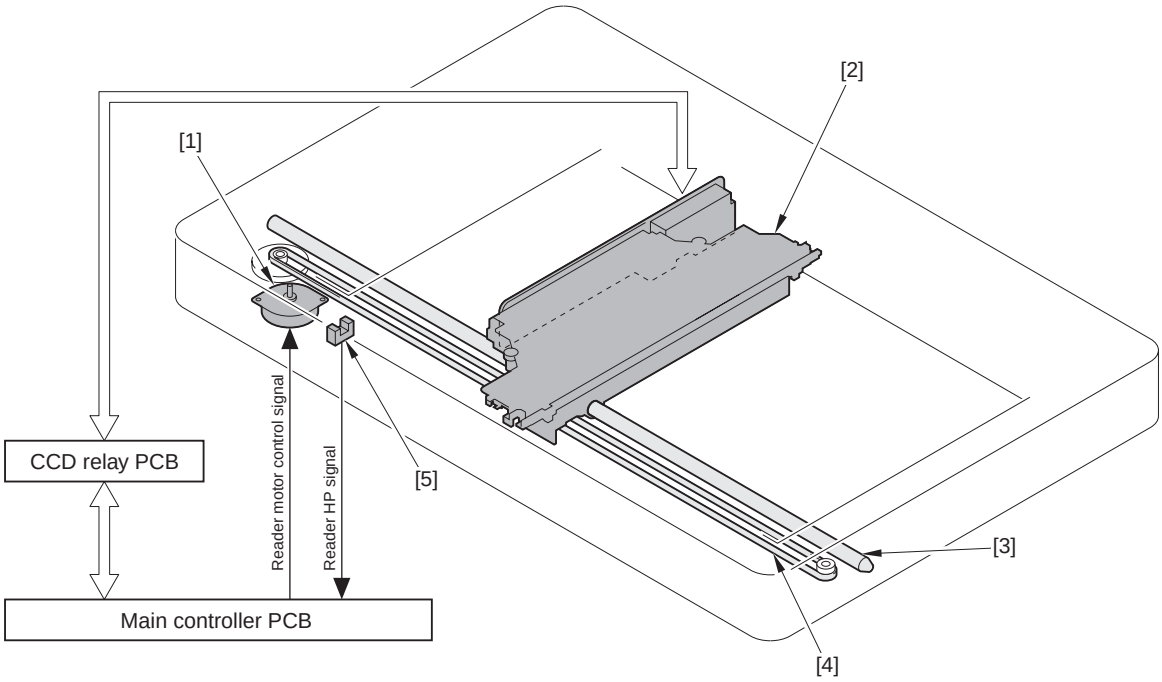
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-5-1

Item	Function/Method
Lamp	Cold-cathode tube
Document scan	Book mode: Scanning by movement of the CCD unit ADF: Scanning in stream reading mode with CCD unit fixed
Reading resolution	600 dpi x 600 dpi
Gradation	256 gradation
Productivity (ADF)	Single-sided: 20.8 ipm (LTR), 19.7 ipm (A4) Double-sided: Approx. 7 ipm (A4/LTR)
Detection of the carriage position	Reader HP sensor (SR717)
Magnification change (Zoom)	50 to 200 % (Sub scanning direction only. Image processing by the main controller PCB)
Lens	Fixed focus lens
CCD	Number of lines: 1 line each for RGB Pixels: 5400 pixels/color Maximum document reading width: Equivalent to LTR
CCD unit drive control	Drive control by the reader motor (M12)
Document lamp	Lighting control by the inverter circuit
Document size detection	Not provided

5.1.2 Major Components

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



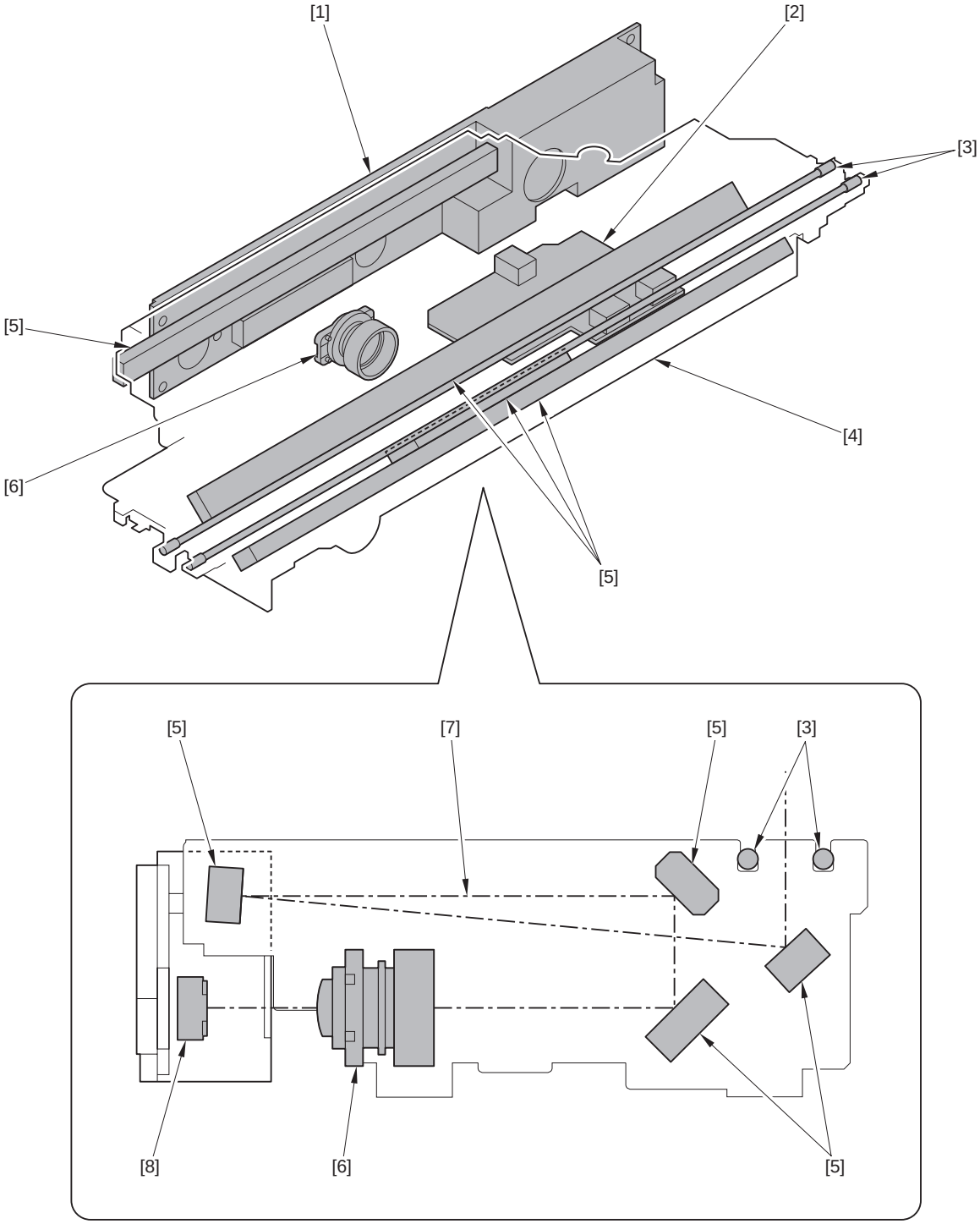
F-5-1

[1] Reader motor (M12)
[2] CCD unit
[3] Guide shaft
[4] Carriage belt
[5] Reader HP sensor (SR717)

Reading on the copyboard
The document loaded on the copyboard is read by the CCD unit, which moves in the horizontal direction.
The CCD unit is driven by the reader motor (M12).
The CCD unit home position is detected by the reader HP sensor (SR717).

Constitution of the CCD unit

The light illuminated from the 2 document lamps (LAMP1, 2) is reflected to the original and reaches to the CCD via the 4 mirrors and the lenses.



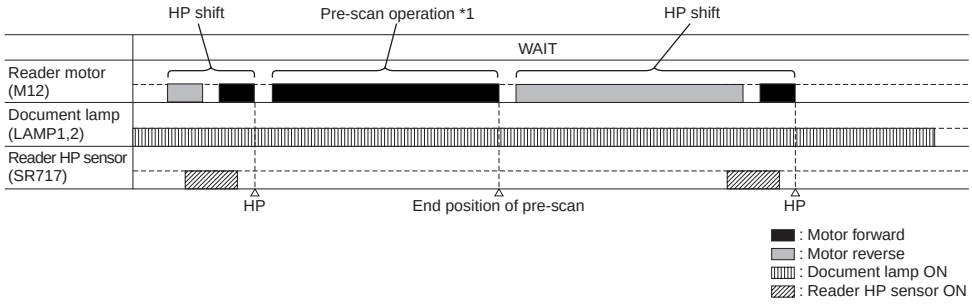
F-5-2

[1]	CCD PCB (PCB11)	[2]	Inverter PCB (PCB12)
[3]	Document lamps (LAMP1, 2)	[4]	CCD unit
[5]	Mirrors	[6]	Lenses
[7]	Light path	[8]	CCD

5.2 Basic Sequence

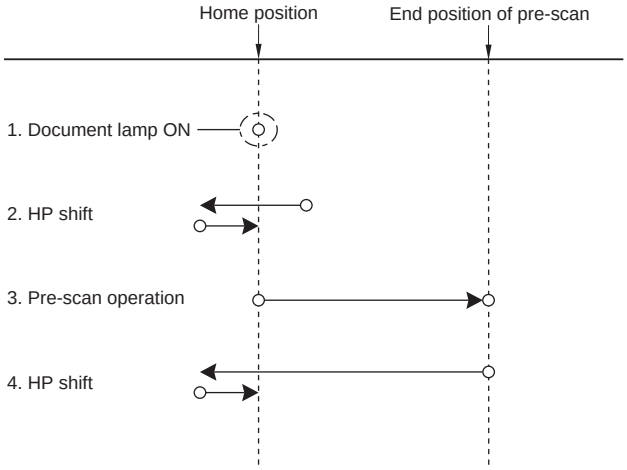
5.2.1 Basic Sequence of Operation at Power-on

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-5-3

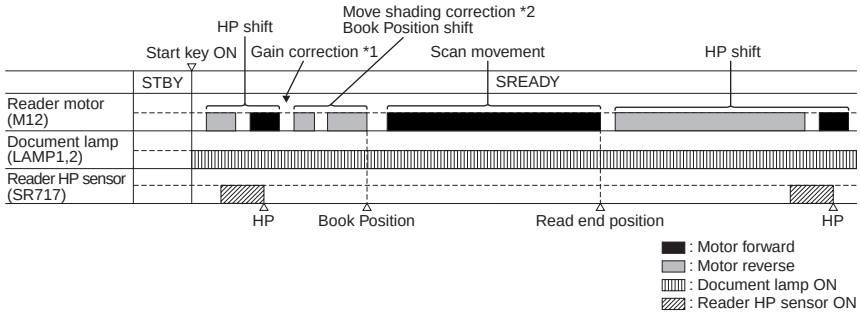
*1: Pre-scan operation: the machine drives the A4R-long scan operation (motor drive only) to smooth the drive belt and grease.



F-5-4

5.2.2 Basic Sequence of Operation in Response to a Press on the Start Key (book)

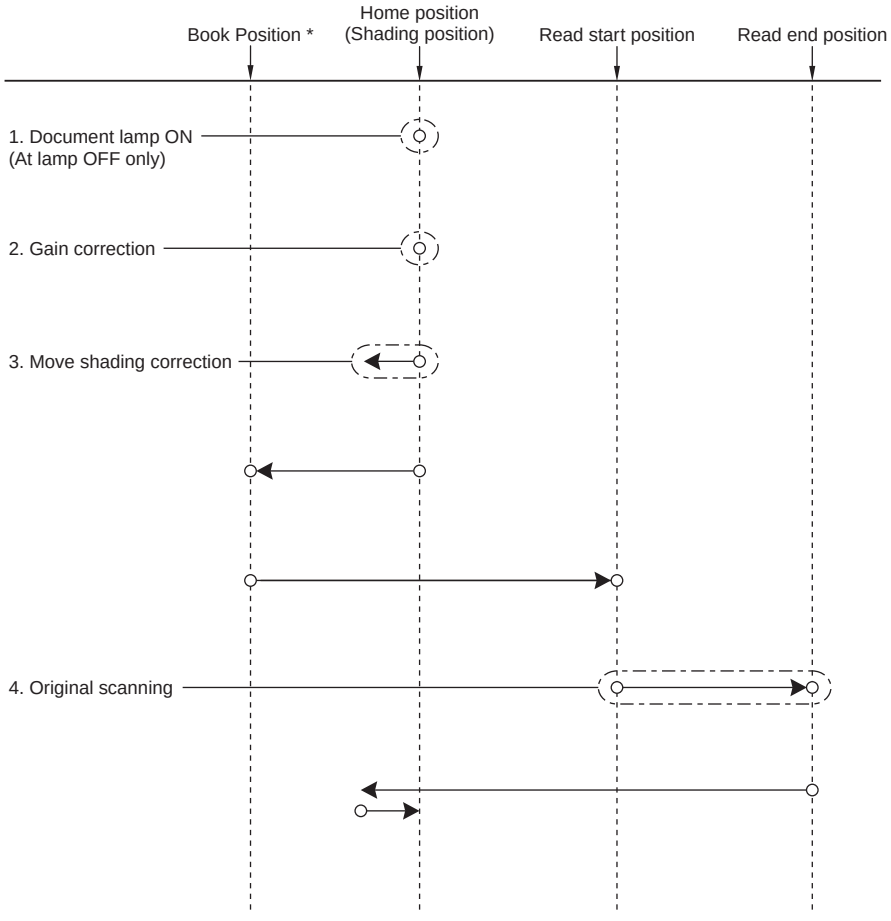
imageRUNNER C1022 / imageRUNNER C1022i



F-5-5

*1 Gain correction: The gain ratio of the analog video signal output from CCD is adjusted to be a fixed value.
*2 Move shading correction: Even when the document density is constant, the CCD output level does not become constant due to the following reasons.
- Variation in pixels for CCD
- Difference of the transmitted light intensity between the center and the surrounding of the lens
- Difference of the light intensity between the center and the surrounding of the document lamp
- Deterioration of the document lamp

Shading correction is performed to correct unevenness of the CCD output level.

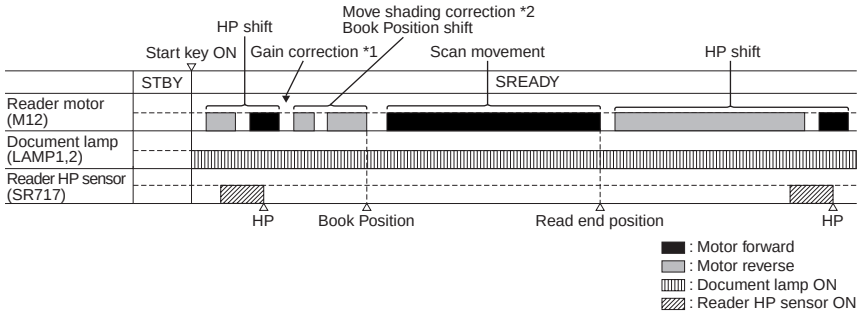


F-5-6

* Book Position: the position at which the motor is accelerated to prepare for reading.

5.2.3 Basic Sequence of Operation in Response to a Press on the Start Key (book)

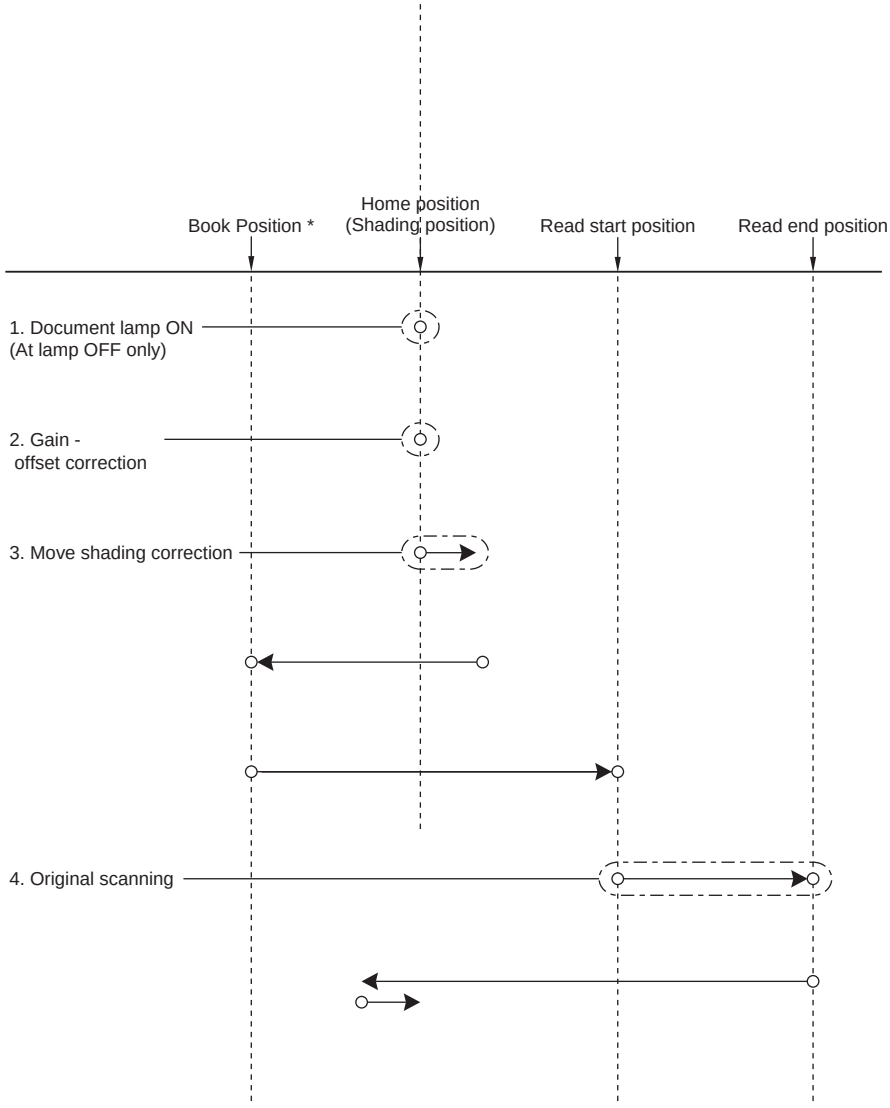
Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-5-7

*1 Gain correction: The gain ratio of the analog video signal output from CCD is adjusted to be a fixed value.
*2 Move shading correction: Even when the document density is constant, the CCD output level does not become constant due to the following reasons.
- Variation in pixels for CCD
- Difference of the transmitted light intensity between the center and the surrounding of the lens
- Difference of the light intensity between the center and the surrounding of the document lamp
- Deterioration of the document lamp

Shading correction is performed to correct unevenness of the CCD output level.



F-5-8

* Book Position: the position at which the motor is accelerated to prepare for reading.

5.3 Various Control

5.3.1 Lamp Control

5.3.1.1 Overview

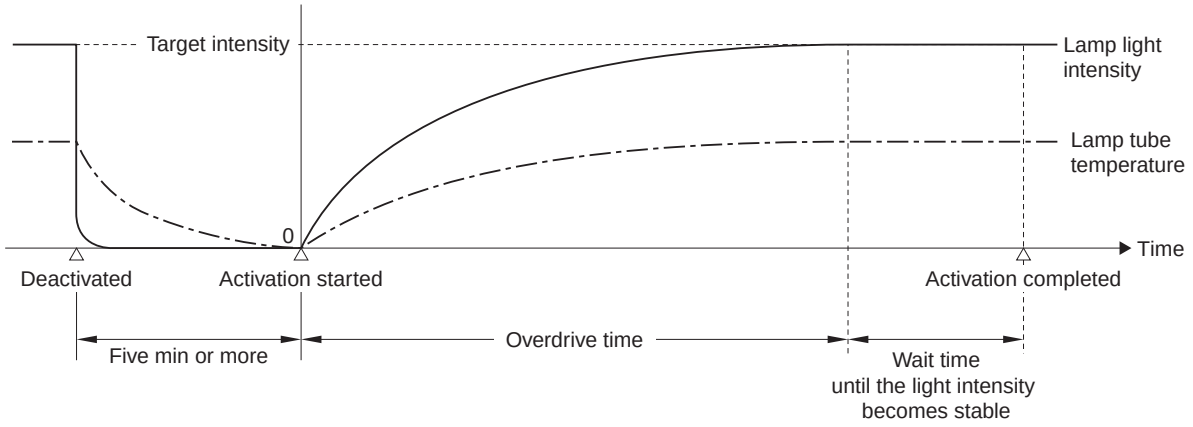
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Advance lamp activation control
It takes 9 to 25 sec (which varies depending on the surrounding temperature) from when the cold-cathode tube lamp, which is used as a document lamp, is activated to when the light intensity reaches the target intensity.
If the document lamp is deactivated immediately after the scan job is completed, it takes time until the light intensity becomes stable next time when the lamp is activated, causing productivity to decrease.
The machine deactivates the document lamp when five minutes elapse after the scan job is completed.
If the next job is started within five minutes after the scan job is completed, reading can be performed immediately because the document lamp has been activated.
Even in the condition where the document lamp has been deactivated, if the next job is started within five minutes (within 10 minutes after the previous job is completed), the temperature of the document lamp tube is relatively high, and the time required until reading is enabled can be reduced.

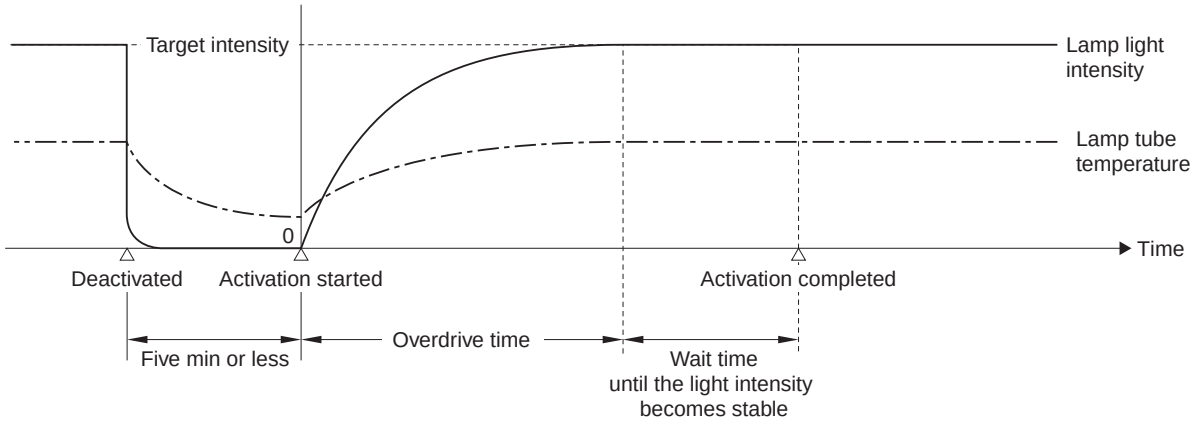
Even after five minutes elapse, the document lamp is activated in advance when any of the following operations is performed. The machine reduces the wait time by activating the document lamp before the scan job is started.
- Pressing a button on the control panel
- Inserting a USB memory into the USB slot
- Inserting a memory card into the card slot
- Opening/closing the front cover or reverse assembly cover
- Opening/closing the cassette
- Setting paper in the empty cassette
- Setting paper in the empty manual feed tray
- Setting paper in the empty document tray

Overdrive control
When starting activation of the document lamp, the machine applies a voltage higher than the one applied at reading. The machine reduces the time required until the light intensity of the document lamp reaches the target intensity (overdrive time) as much as possible by controlling the voltage.
The overdrive time varies depending on the tube temperature at the time when activation of the lamp is started. The tube temperature is affected by the previous activation time, time that elapsed after deactivation, and temperature detected by the environment sensor (PCB28).
The wait time until the activation of the document lamp is completed is calculated by totaling the overdrive time and wait time until the light intensity becomes stable.

In the case that the document lamp is activated when five minutes or more elapse after being deactivated.



In the case that the document lamp is activated within five minutes after being deactivated.



F-5-9

5.3.2 Enlargement/Reduction

5.3.2.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine does not perform optical magnification change. It always reads a document at 100 % (original size).
However, the main controller has a function to perform digital magnification change at 50 to 200 %, and the magnification can be set in increments/decrements of 1 %.

5.3.3 Detecting the Size of Originals

5.3.3.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine does not perform document size detection. (The machine is not equipped with the document size sensor.)
The machine performs reading in the size specified on the control panel when reading the document.

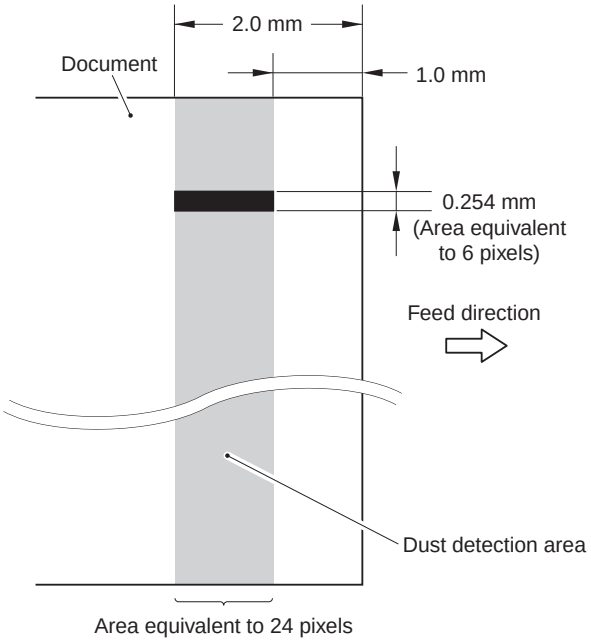
5.3.4 Dirt Sensor Control

5.3.4.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine performs dust detection control when stream reading is performed on the ADF.
When dust is adhered to the scanning glass surface, the correction is made to remove the dust from the scanned image.
Dust detection control is executed for all documents for which stream reading is performed regardless of the mode.

Dust detection
When the CCD scans the leading edge of the document, if there is the object with the width of less than 6 pixels (0.254 mm), length of 24 pixels and the density from 16/255 to 188/255 in the area of 1.0 to 2.0 mm (equivalent to 24 pixels) from the leading edge of the document, the machine determines that "dust is adhered to the scanning glass surface".



F-5-10

However, since the dust detection control system is designed to perform detection for A4-size document, it is only applied in the area of 103 mm at both sides (= 206 mm) based on the center line. For a document of which width is larger than A4-size, there is an area at both edges where dust detection control is not performed.

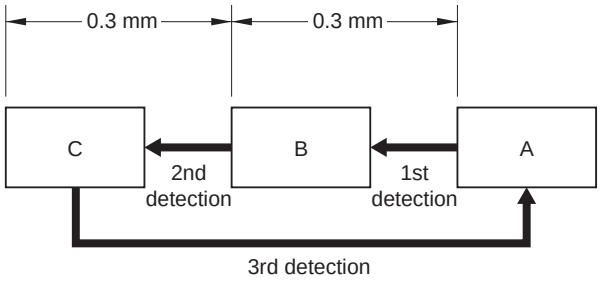
Dust correction
When dust is detected, the correction of removing the dust is automatically performed based on the scanned data.
However, when a document does not have a margin or it has an image on the margin, the machine determines that dust is adhered to the scanning glass surface, which may cause incorrect correction to be performed. In such a case, disabling of the correction can be set in the user mode.

Adjustment/Cleaning > Automatic correction of feeder dust
ON: Perform automatic correction (initial setting)
OFF: Do not perform automatic correction.

5.3.4.2 Stream Reading Position Shift

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

When dust is detected at the final document in the job, the stream reading position is shifted to prevent dust lines from being printed in the subsequent job.
There are three stream reading positions, and the position is shifted sequentially every time dust is detected when the job is completed ([A] --> [B] --> [C]).
When dust is detected at the 3rd detection, the stream reading position returns to the original position ([C] --> [A]).



F-5-11

When dust is detected in three jobs consecutively, the alarm message "The scanning assembly is dirty" is displayed in a pop-up window on the control panel.
The alarm message disappears when pressing the [OK] button displayed in the pop-up window.
When the subsequent job is started or the power is turned OFF/ON, information such as the number of times dust was detected or scanning positions is reset.
Disabling of display of the alarm message can be set in the user mode.

Common specification settings > Display of the error for feeder dust
ON: Display the alarm message. (Initial setting)
OFF: Do not display the alarm message (It is possible to set the dust detection function only.)

5.4 Parts Replacement Procedure

5.4.1 ADF Unit + Reader Unit

5.4.1.1 Before Removing the ADF Unit + Reader Unit

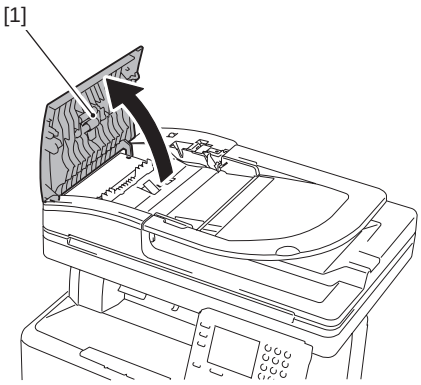
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]

5.4.1.2 Removing the ADF Unit + Reader Unit

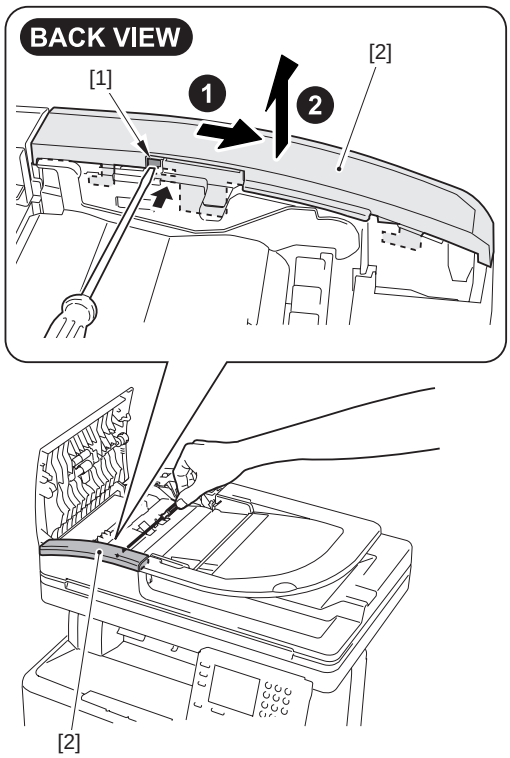
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Open the ADF upper cover [1].



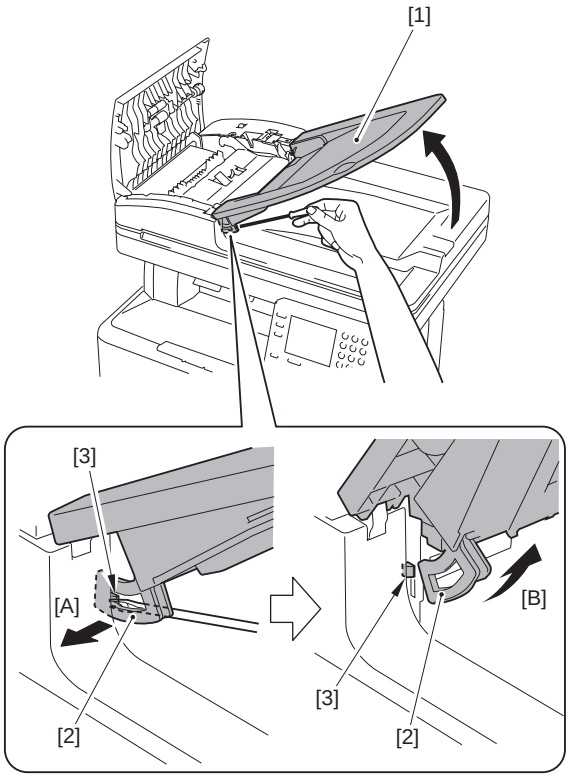
F-5-12

2) While pushing the claw [1], remove the ADF upper front cover [2].



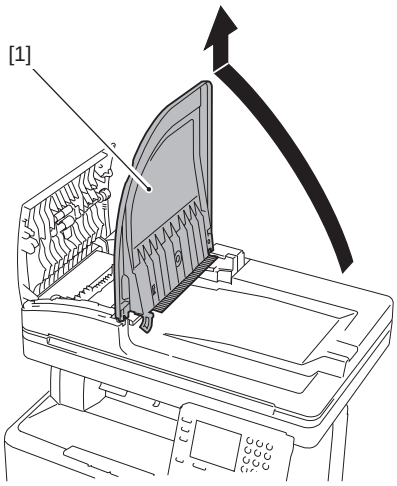
F-5-13

3) Open the ADF tray [1] to the position indicated in the figure below. Using a flat-blade screwdriver, press the hook [2] in the direction of the arrow [A] and release the claw [3] to remove the ADF tray in the direction of the arrow [B].



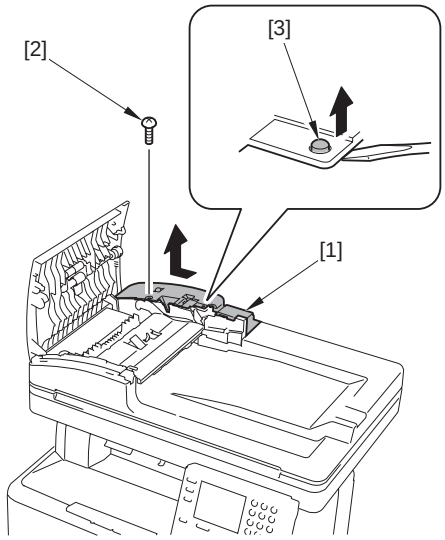
F-5-14

4) Open the ADF tray [1] to the position indicated in the figure below to remove it upward.



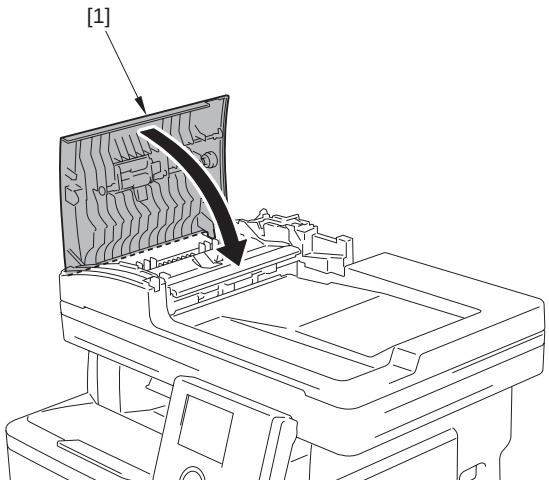
F-5-15

5) Remove the ADF upper rear cover [1].
- 1 screw [2]
- 1 boss [3]



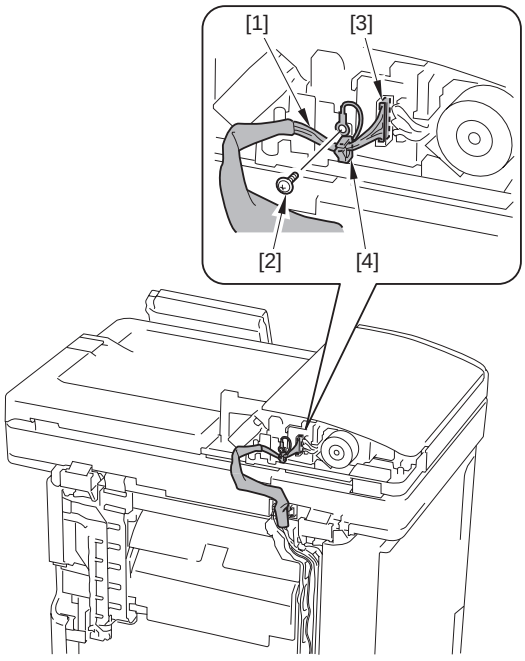
F-5-16

6) Close the ADF upper cover [1].



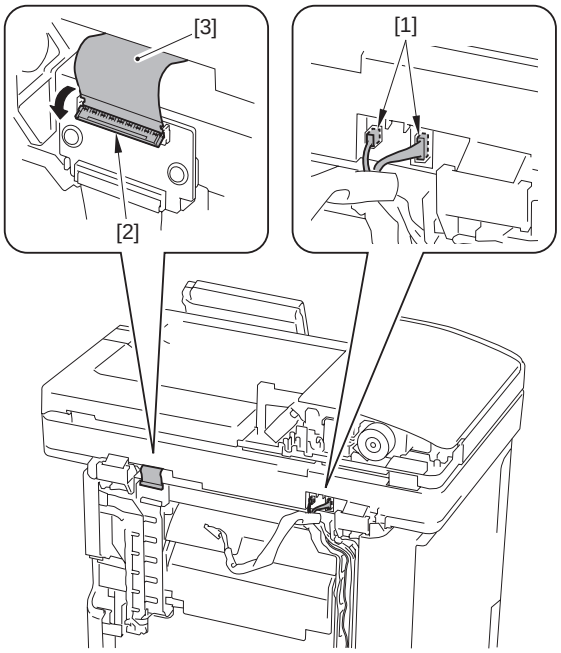
F-5-17

7) Remove the ADF unit communication cable [1].
- 1 screw [2]
- 1 connector [3]
- 1 wire saddle [4]



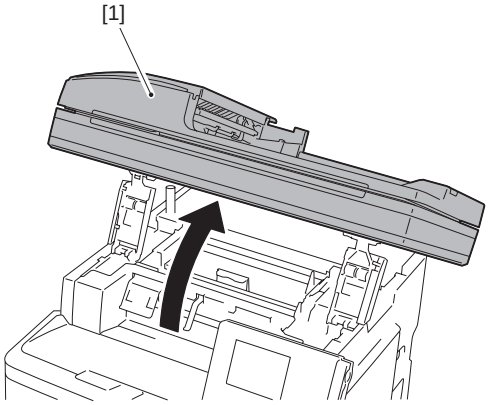
F-5-18

8) Disconnect the 2 connectors [1]. Open the connector holder [2] to disconnect the flat cable [3].



F-5-19

9) Open the ADF unit + reader unit [1].

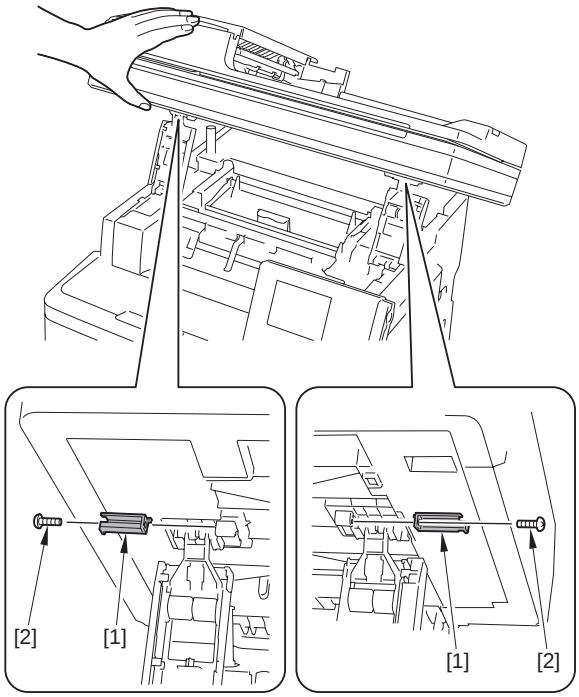


F-5-20

Points to note at work
Be sure not to close the ADF unit + reader unit hastily. If closing the ADF unit + reader unit hastily, the impact can cause damage.
Also be careful not to get your hands caught between the ADF unit + reader unit and the host machine.

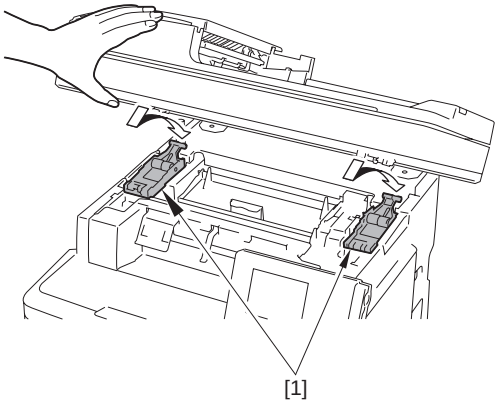
10) Remove the 2 hinge stoppers [1].
- 2 screws (binding) [2]

Points to Note When Removing the Hinge Stopper
When removing both the left and right hinge stoppers, the ADF + the reader unit close under their own weight, in which your hand may be caught. Be sure to perform the operation while holding them with one hand.



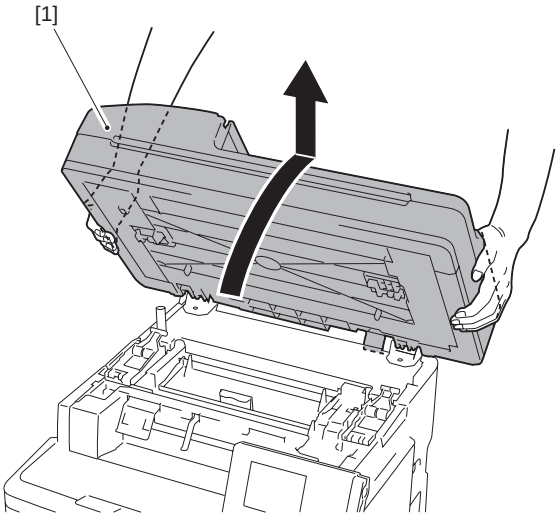
F-5-21

11) Bring the 2 hinges [1] down.



F-5-22

12) Open the ADF unit + reader unit [1] to the position indicated in the figure below to remove it upward.



F-5-23

5.4.1.3 Procedure after Replacing the ADF Unit

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

After replacing the ADF unit, execute automatic detection of the CCD reading position at ADF stream reading in the following service mode.
COPIER> FUNCTION> INSTALL> STRD-POS

[Operation]
Adjust the reading position by moving the scanner in increments of 0.1 mm.

[Time]
When the lamp is turned on: Adjustment time; 10 seconds
When the lamp is not turned on: Lamp adjustment time; 10 to 30 seconds + Adjustment time; 10 seconds

5.4.1.4 Procedure after Replacing the Reader Unit

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

After replacing the reader unit, execute automatic detection of the CCD reading position at ADF stream reading in the following service mode.
COPIER> FUNCTION> INSTALL> STRD-POS

[Operation]
Adjust the reading position by moving the scanner in increments of 0.1 mm.

[Time]
When the lamp is turned on: Adjustment time; 10 seconds
When the lamp is not turned on: Lamp adjustment time; 10 to 30 seconds + Adjustment time; 10 seconds

5.4.2 Reader Unit

5.4.2.1 Before Removing the Reader Unit

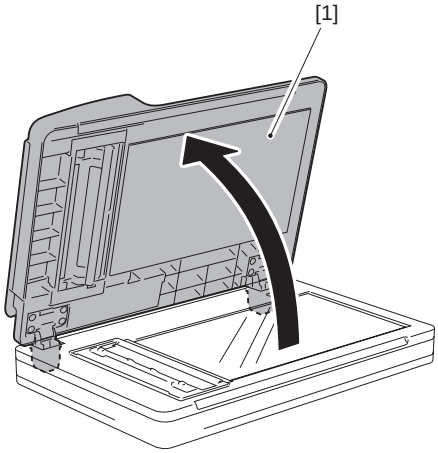
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ADF unit + reader unit.(page 5-9)Reference [Removing the ADF Unit + Reader Unit]

5.4.2.2 Removing the Reader Unit

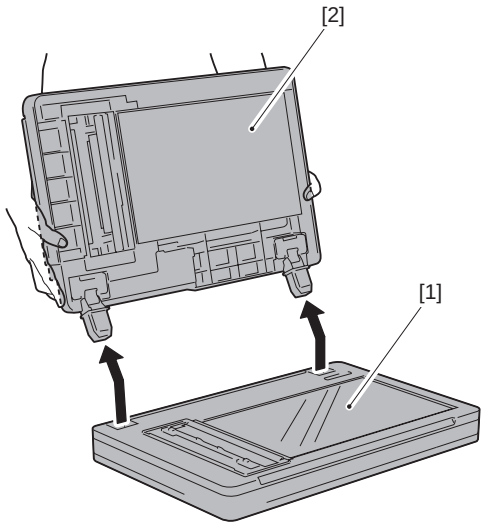
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Open the ADF unit [1].



F-5-24

2) Remove the ADF unit [2] from the Reader Unit [1].



F-5-25

MEMO:
The CCD unit in the reader unit cannot be replaced in the field. If the CCD unit is broken, replace the reader unit.

5.4.2.3 Procedure after Replacing the Reader Unit

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

After replacing the reader unit, execute automatic detection of the CCD reading position at ADF stream reading in the following service mode.
COPIER> FUNCTION> INSTALL> STRD-POS

[Operation]
Adjust the reading position by moving the scanner in increments of 0.1 mm.

[Time]
When the lamp is turned on: Adjustment time; 10 seconds
When the lamp is not turned on: Lamp adjustment time; 10 to 30 seconds + Adjustment time; 10 seconds

Chapter 6 Original Feeding System

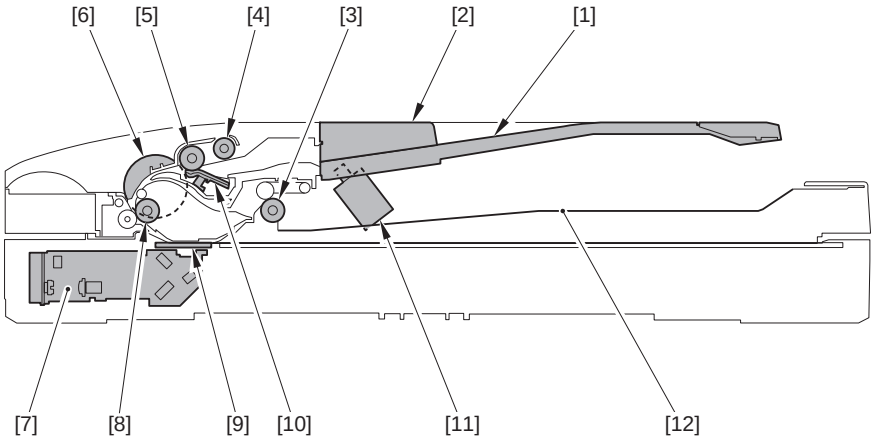
Contents

6.1 Basic Construction 6-1
6.1.1 Overview 6-1
6.2 Basic Operation 6-3
6.2.1 Operation Mode 6-3
6.2.2 Document Size Detection 6-5
6.3 Detection Jams 6-6
6.3.1 Overview 6-6
6.4 ADF/DADF 6-7
6.4.1 ADF/DADF 6-7
6.4.1.1 Removing the ADF unit 6-7
6.4.1.2 Procedure after Replacing the ADF Unit 6-8
6.4.2 Pickup Feed Unit 6-8
6.4.2.1 Removing the ADF Pickup Feed Unit 6-8
6.4.3 Pick-up Roller 6-10
6.4.3.1 Removing the ADF Pickup Roller 6-10
6.4.4 Separation Roller 6-11
6.4.4.1 Removing the ADF Separation Roller 6-11
6.4.5 Pick-up Motor 6-12
6.4.5.1 Before Removing the ADF Pickup Motor 6-12
6.4.5.2 Removing the ADF Pickup Motor 6-12
6.4.6 Pick-up Solenoid 6-13
6.4.6.1 Before Removing the ADF Pickup Solenoid 6-13
6.4.6.2 Removing the ADF Pickup Solenoid 6-13
6.4.7 Separation Pad 6-14
6.4.7.1 Removing the ADF Separation Pad 6-14

6.1 Basic Construction

6.1.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



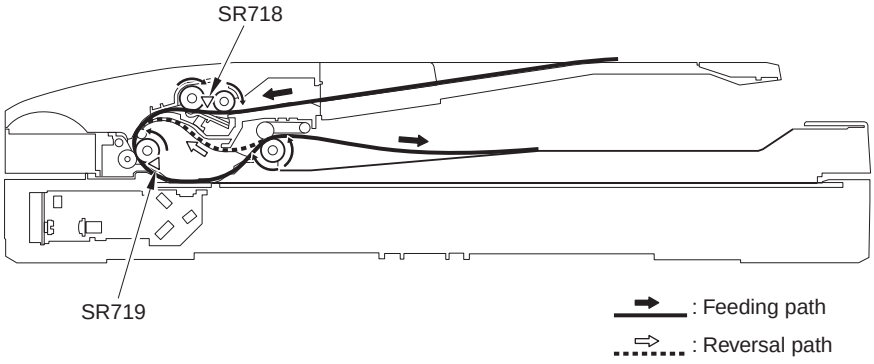
F-6-1

[1]	ADF tray	[2]	Slide guide	[3]	ADF delivery roller
[4]	ADF pickup roller	[5]	ADF separation roller	[6]	ADF pickup motor (M13)
[7]	CCD unit	[8]	ADF feed roller	[9]	Reading glass surface
[10]	ADF separation pad	[11]	ADF delivery solenoid (SL5016)	[12]	ADF delivery tray

Reading at ADF

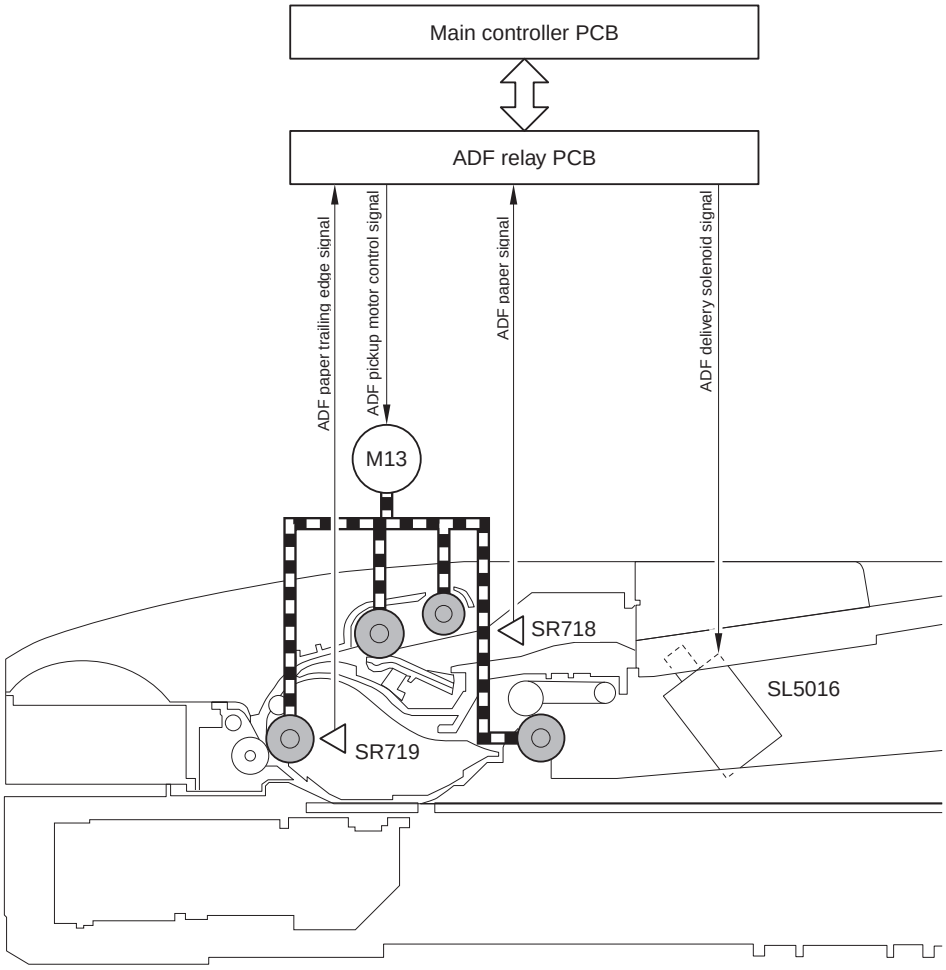
1) When the ADF paper sensor (SR718) detects the document on the document tray, the ADF pickup motor (M13) works and the ADF pickup roller descends to the surface of the document.
2) A document set on the document ray is transported to the ADF separation roller by the ADF pickup roller while being pressed by the slide guide so that it does not skew.
3) Only one sheet of document is separated by the ADF separation roller and the ADF separation pad.
4) The document is transported to the reading glass surface by the ADF feed roller.
   The ADF paper trailing edge sensor (SR719) detects the leading edge of the document.
5) While being transported by the ADF feed roller, the document is read by the CCD unit.
6) The document is delivered on the ADF delivery tray by the ADF delivery roller.

A 2-sided original with its first side read is delivered to the reading position again with the reversal path.



F-6-2

All the ADF rollers are driven by the ADF pickup motor.



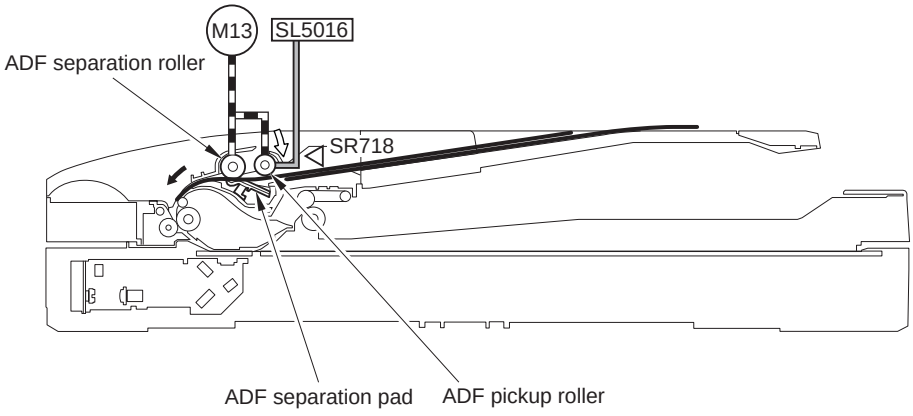
F-6-3

6.2 Basic Operation

6.2.1 Operation Mode

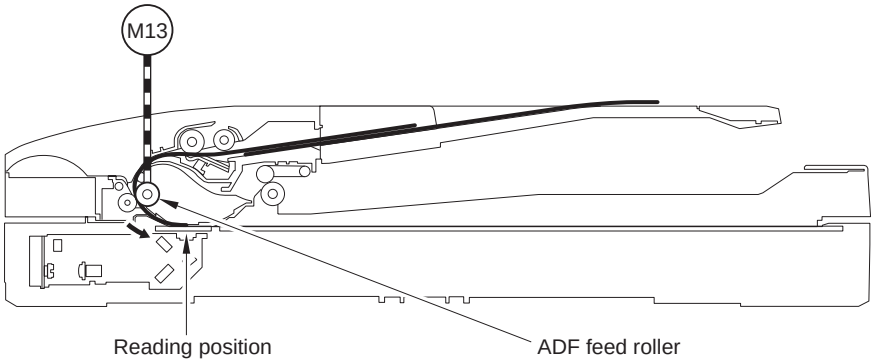
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Single-sided continuous pickup
The following shows the operation sequence when two sheets of single-sided documents are set on the document tray.
1) The ADF paper sensor (SR718) detects the document loaded on the document tray, and sends a signal indicating "paper exists" to the main controller.
2) The ADF pickup motor (M13) rotates forward.
Driven by the ADF pickup motor, the ADF pickup roller moves down until it reaches the document, and then feeds the document.
In this condition, one sheet of the upper-side document is picked up by the ADF separation roller and ADF separation pad.



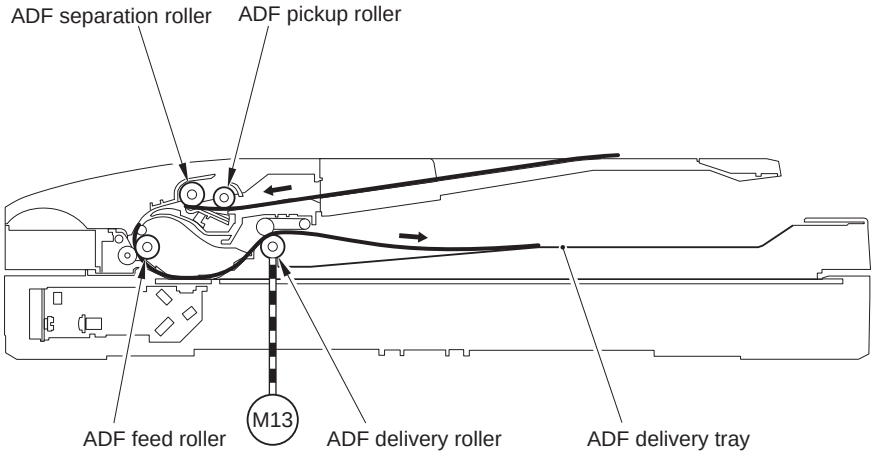
F-6-4

3) When the lead edge of the document reaches the ADF feed roller, the feed speed becomes approximately 1.2 times (which is the same as the reading speed).
If no 'stop' request is sent from the main controller when the lead edge of the document reaches in front of the reading position, reading operation starts.



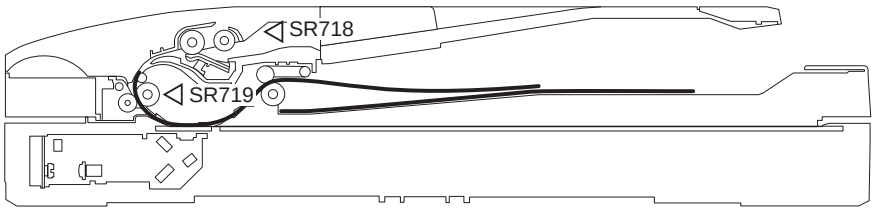
F-6-5

4) When reading is completed, the document is delivered to the ADF delivery tray by the ADF delivery roller.
When a specified period of time elapses after the trailing edge of the first page passes through the ADF separation roller, the second page is picked up by the ADF pickup roller.
Because the ADF feed roller rotates faster than the ADF separation roller, a specified interval is secured between the first and second pages.



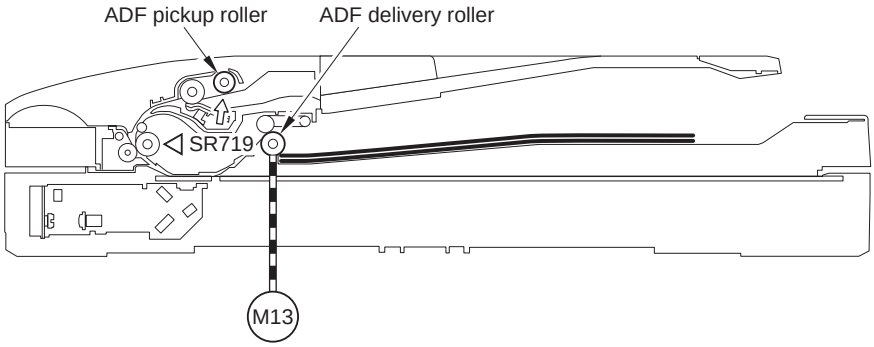
F-6-6

5) When the trailing edge of the second page passes through the ADF paper trailing edge sensor (SR719), the ADF paper sensor detects presence/absence of the paper.
When no document is detected, the document is considered to be the last page.



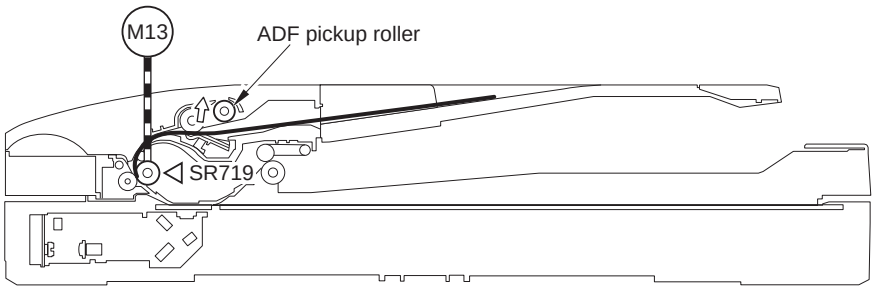
F-6-7

6) When a specified period of time (time until the trailing edge of the document passes through the ADF delivery roller) elapses after the trailing edge of the document passes through the ADF paper trailing edge sensor, the ADF pickup motor stops and then the ADF pickup roller moves up to a specified position.



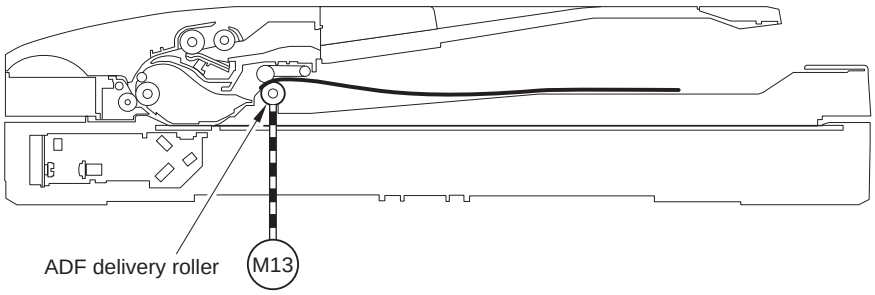
F-6-8

Double-sided document reading
The procedure of reading a double-sided document is the same as that of reading a single-sided document until the step where the lead edge of the document reaches the ADF paper trailing edge sensor. The following shows the operational sequence afterwards.
1) When the ADF paper trailing edge sensor detects the lead edge of the document, the ADF pickup motor stops and then the ADF pickup roller moves up.
When the ADF pickup roller moves up, feeding of the second and later pages stops.
As soon as receiving a drive signal from the main controller, the ADF pickup motor restarts feeding.



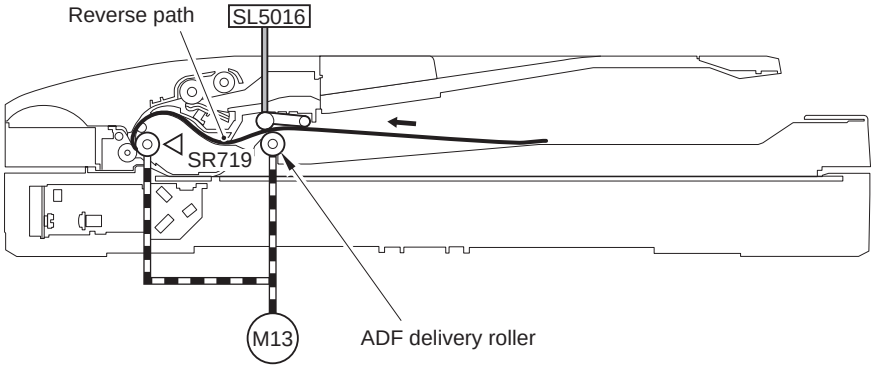
F-6-9

2) When the trailing edge of the document is transported until it is caught between the ADF delivery rollers, the ADF pickup motor stops.



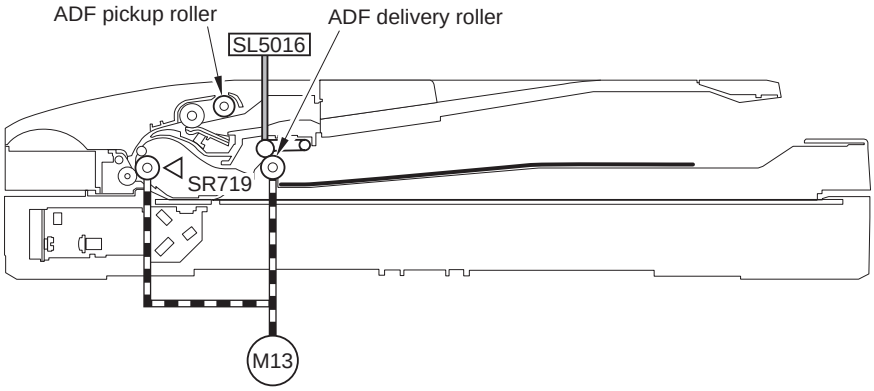
F-6-10

3) The ADF pickup motor rotates in reverse. The document is fed through the reverse path.
When the ADF paper trailing edge sensor detects the lead edge of the document, the ADF pickup motor stops.
As soon as receiving a drive signal from the main controller, the ADF pickup motor rotates forward. In this condition, the ADF delivery rollers are disengaged by driving the ADF pickup solenoid (SL5016) so that the document is not pulled.



F-6-11

4) When the trailing edge of the document passes through the ADF delivery roller, the ADF pickup solenoid is turned OFF and the ADF delivery rollers are engaged.
5) When a specified period of time (time until the trailing edge of the document passes through the ADF delivery roller) elapses after the trailing edge of the document passes through the ADF paper trailing edge sensor, the ADF pickup motor stops.
In the case of double-sided document reading, the ADF pickup roller has already moved up to a specified position.



F-6-12

6.2.2 Document Size Detection

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine does not perform document size detection. (The machine is not equipped with the document size sensor.)
The machine performs reading in the size specified on the control panel when reading the document.

6.3 Detection Jams

6.3.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Jam detection

T-6-1

Jam Code	Jam Type	Jam Condition	Single-sided Reading	Double-sided Reading
0001H	Delay jam	The leading edge of paper does not reach the ADF paper trailing edge sensor within 1.8 sec after the trailing edge of precedent page passes through the ADF paper trailing edge sensor in 1-sided multiple jobs.	Yes	-
		The leading edge of paper does not reach the ADF paper trailing edge sensor within 1.2 sec after reverse operation starts in 2-sided job.	-	Yes
0002H	Residual jam	The trailing edge of paper does not passes through the ADF paper trailing edge sensor within 3.4 sec after the leading edge of paper reaches the ADF paper trailing edge sensor in 1-sided job.	Yes	-
		The trailing edge of paper does not passes through the ADF paper trailing edge sensor within 3.5 sec after the leading edge of paper reaches the ADF paper trailing edge sensor in 2-sided job.	-	Yes
0094H	In-body residual jam (initial residual)	The ADF paper trailing edge sensor detects paper at power-ON.	Yes	Yes
0095H	Pickup NG	The paper is removed from the document tray during the pickup operation (within 0.1 sec after the start key is pressed).	Yes	Yes

Jam removal
To remove a jam, open the ADF upper cover, remove a jammed sheet, and then set a document on the document tray.
However, a jam is not removed when the ADF paper trailing edge sensor detects the presence of paper (when residual paper exists).

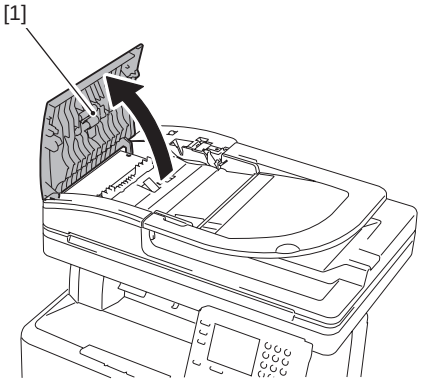
6.4 ADF/DADF

6.4.1 ADF/DADF

6.4.1.1 Removing the ADF unit

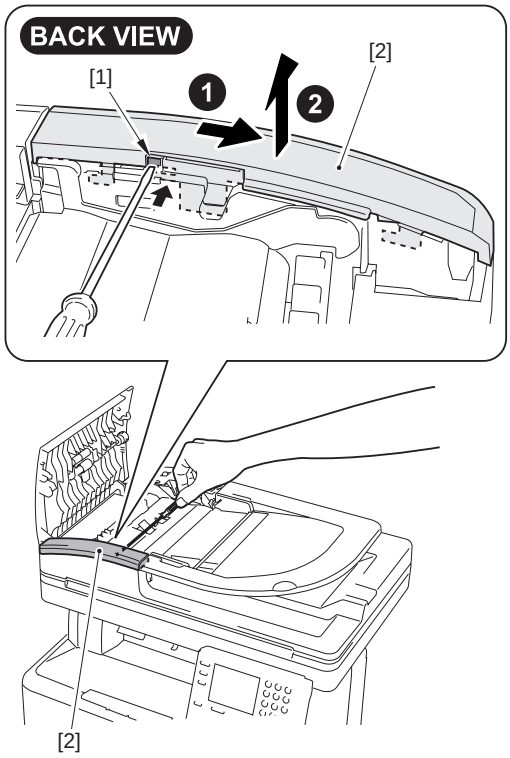
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Open the ADF upper cover [1].



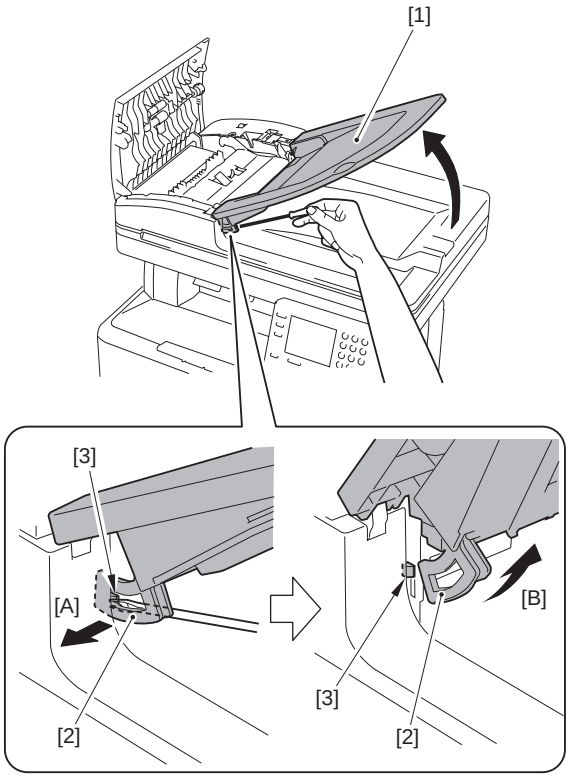
F-6-13

2) While pushing the claw [1], remove the ADF upper front cover [2].



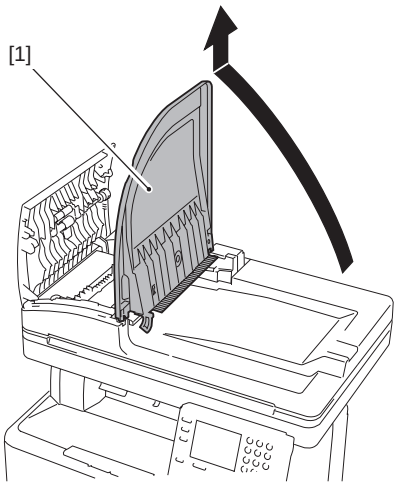
F-6-14

3) Open the ADF tray [1] to the position indicated in the figure below. Using a flat-blade screwdriver, press the hook [2] in the direction of the arrow [A] and release the claw [3] to remove the ADF tray in the direction of the arrow [B].



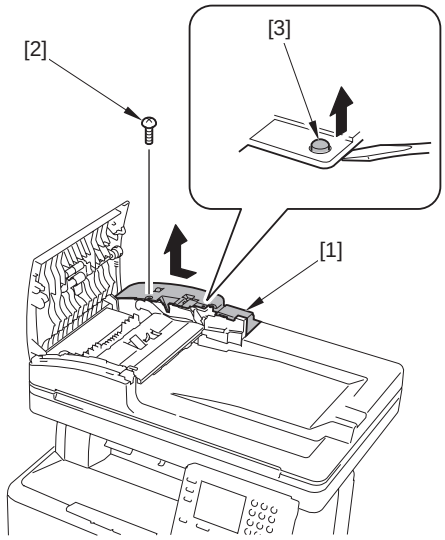
F-6-15

4) Open the ADF tray [1] to the position indicated in the figure below to remove it upward.



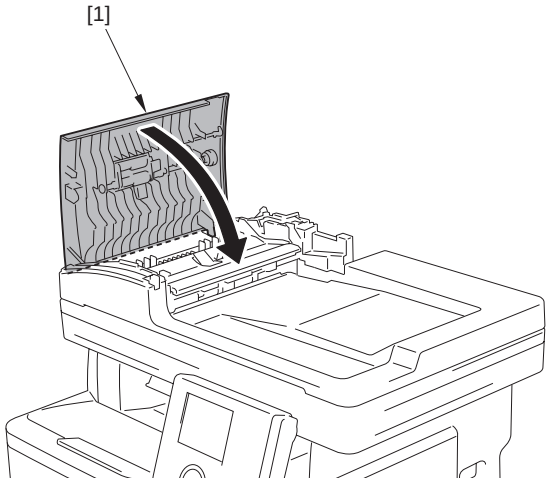
F-6-16

5) Remove the ADF upper rear cover [1].
- 1 screw [2]
- 1 boss [3]



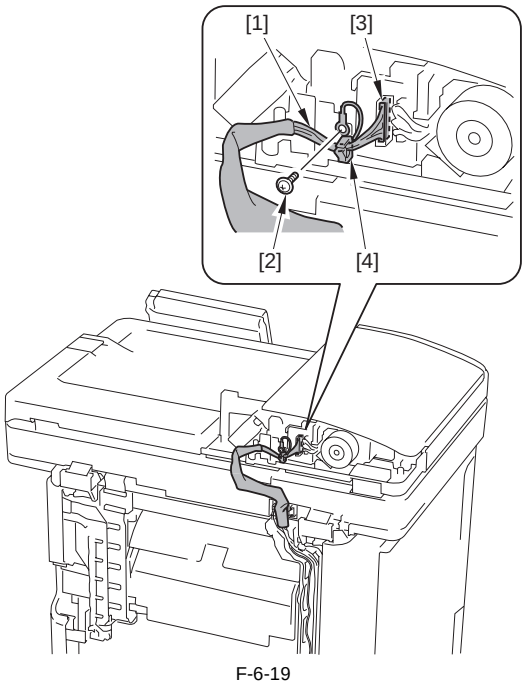
F-6-17

6) Close the ADF upper cover [1].



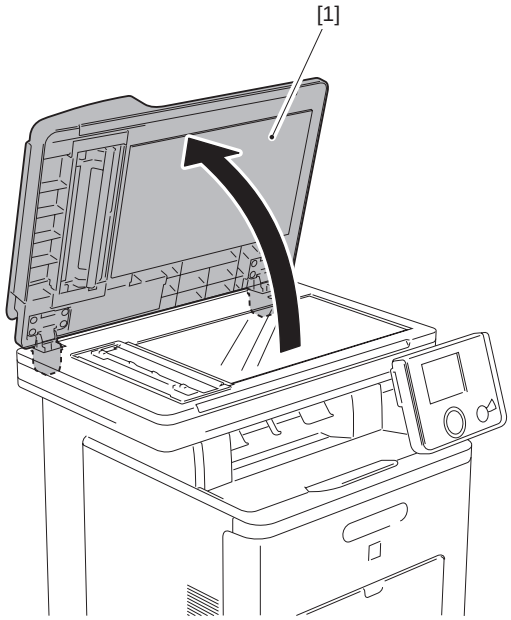
F-6-18

7) Remove the ADF unit communication cable [1].
- 1 screw [2]
- 1 connector [3]
- 1 wire saddle [4]



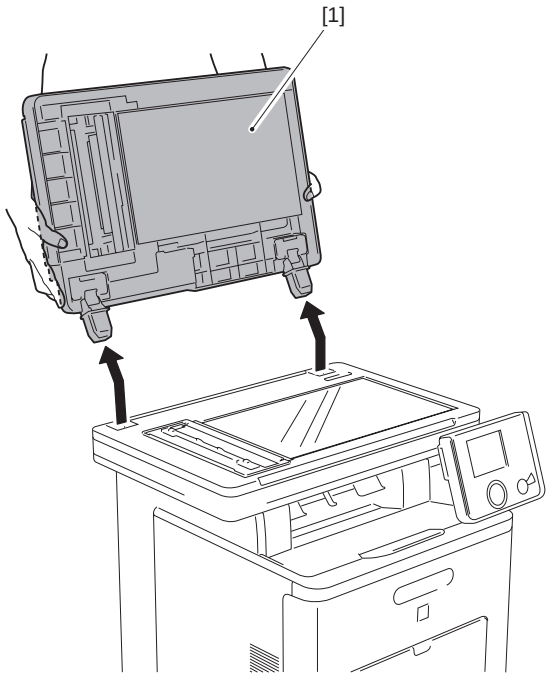
F-6-19

8) Open the ADF unit [1].



F-6-20

9) Remove the ADF unit [1].



F-6-21

6.4.1.2 Procedure after Replacing the ADF Unit

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

After replacing the ADF unit, execute automatic detection of the CCD reading position at ADF stream reading in the following service mode.
COPIER> FUNCTION> INSTALL> STRD-POS

[Operation]
Adjust the reading position by moving the scanner in increments of 0.1 mm.

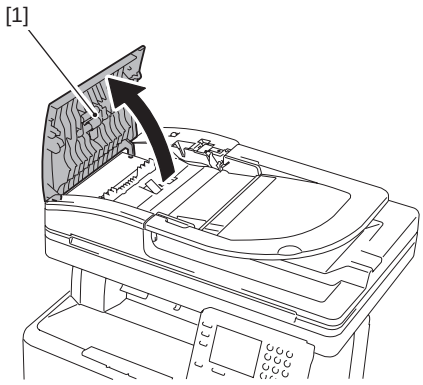
[Time]
When the lamp is turned on: Adjustment time; 10 seconds
When the lamp is not turned on: Lamp adjustment time; 10 to 30 seconds + Adjustment time; 10 seconds

6.4.2 Pickup Feed Unit

6.4.2.1 Removing the ADF Pickup Feed Unit

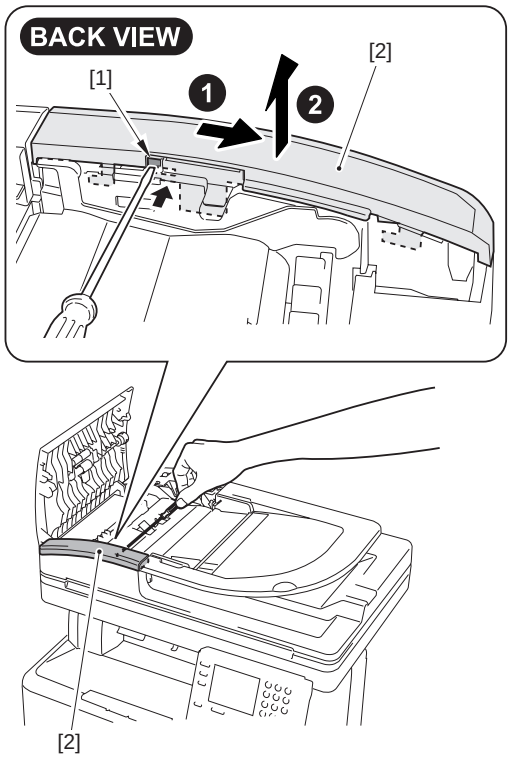
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Open the ADF upper cover [1].



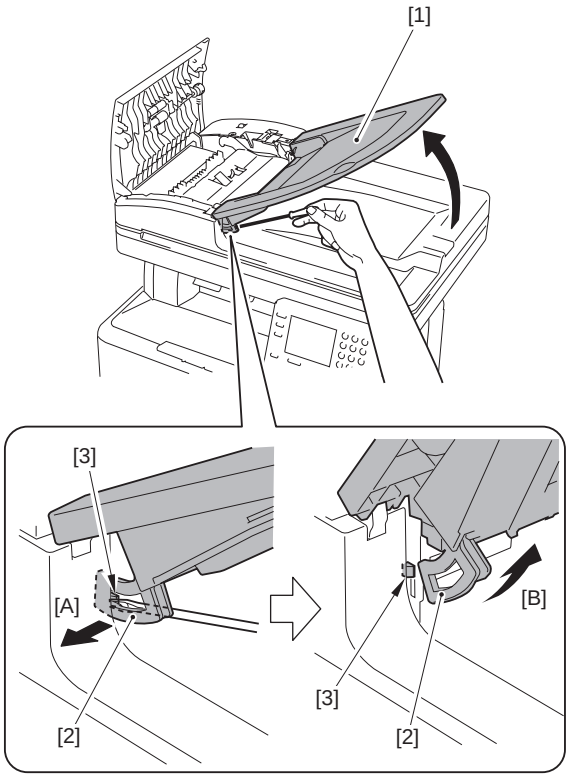
F-6-22

2) While pushing the claw [1], remove the ADF upper front cover [2].



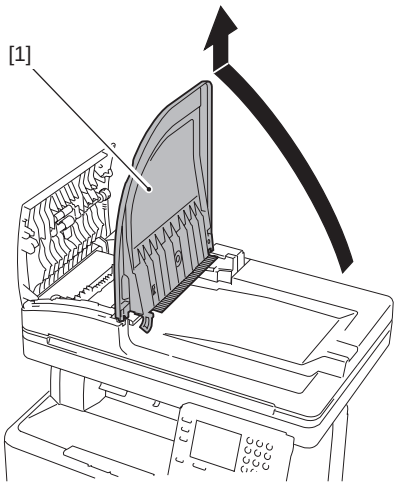
F-6-23

3) Open the ADF tray [1] to the position indicated in the figure below. Using a flat-blade screwdriver, press the hook [2] in the direction of the arrow [A] and release the claw [3] to remove the ADF tray in the direction of the arrow [B].



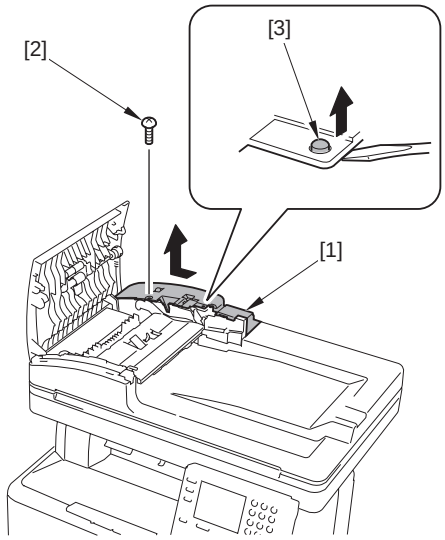
F-6-24

4) Open the ADF tray [1] to the position indicated in the figure below to remove it upward.



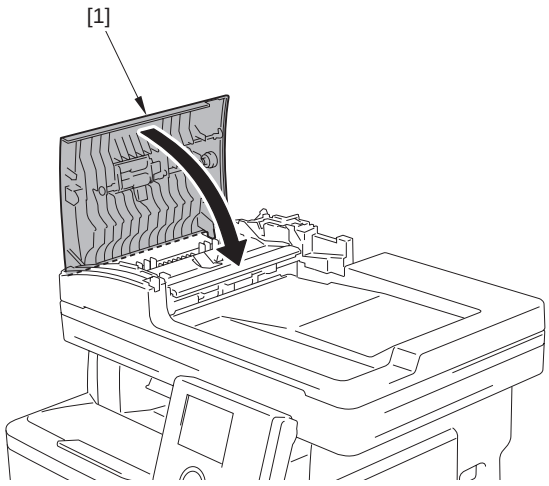
F-6-25

5) Remove the ADF upper rear cover [1].
- 1 screw [2]
- 1 boss [3]



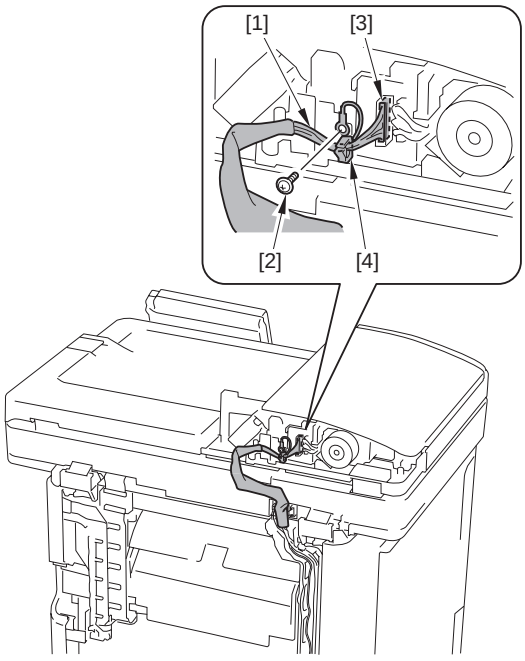
F-6-26

6) Close the ADF upper cover [1].



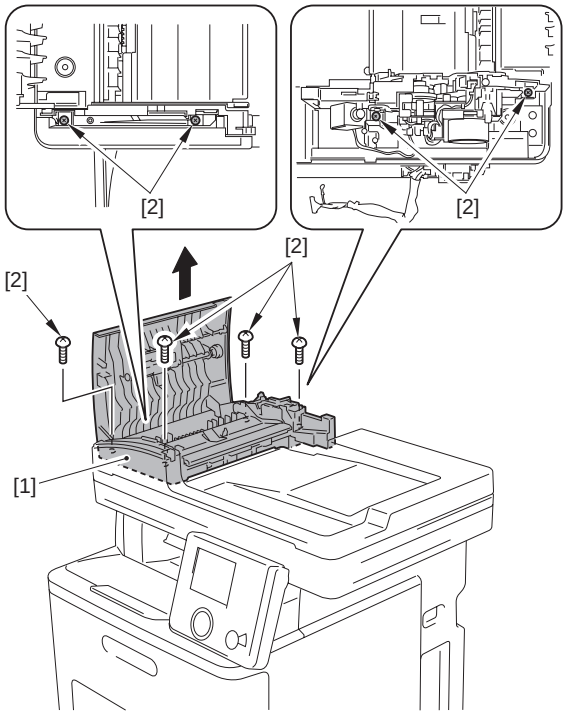
F-6-27

7) Remove the ADF unit communication cable [1].
- 1 screw [2]
- 1 connector [3]
- 1 wire saddle [4]



F-6-28

8) Remove the ADF pickup feed unit [1].
- 4 screws [2]



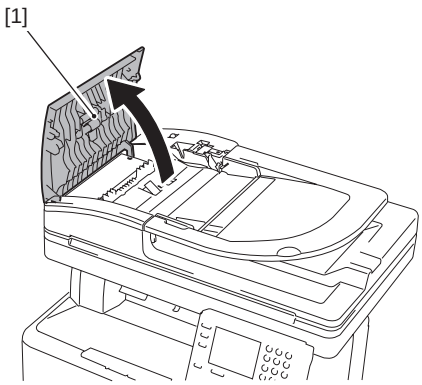
F-6-29

6.4.3 Pick-up Roller

6.4.3.1 Removing the ADF Pickup Roller

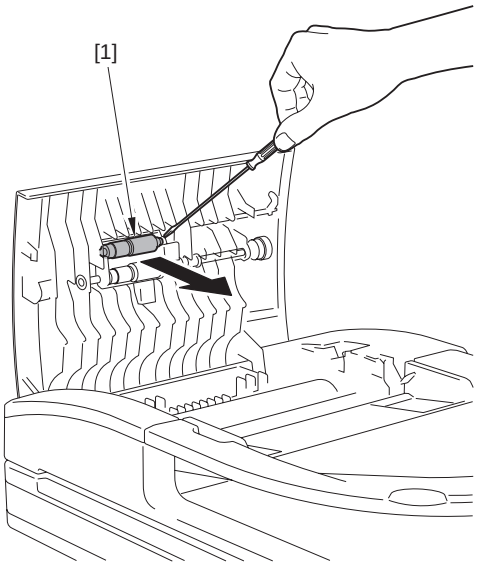
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Open the ADF upper cover [1].



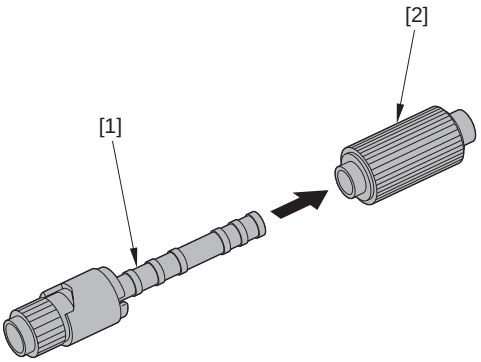
F-6-30

2) Remove the ADF pickup roller unit [1].



F-6-31

3) Remove the ADF pickup roller [2] from the ADF pickup roller shaft [1].



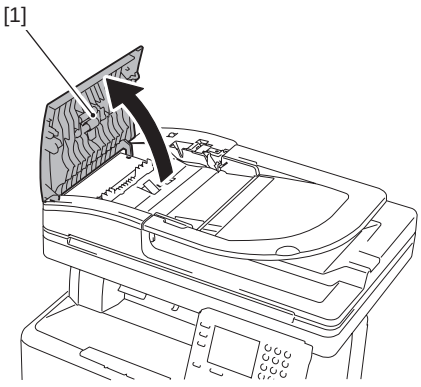
F-6-32

6.4.4 Separation Roller

6.4.4.1 Removing the ADF Separation Roller

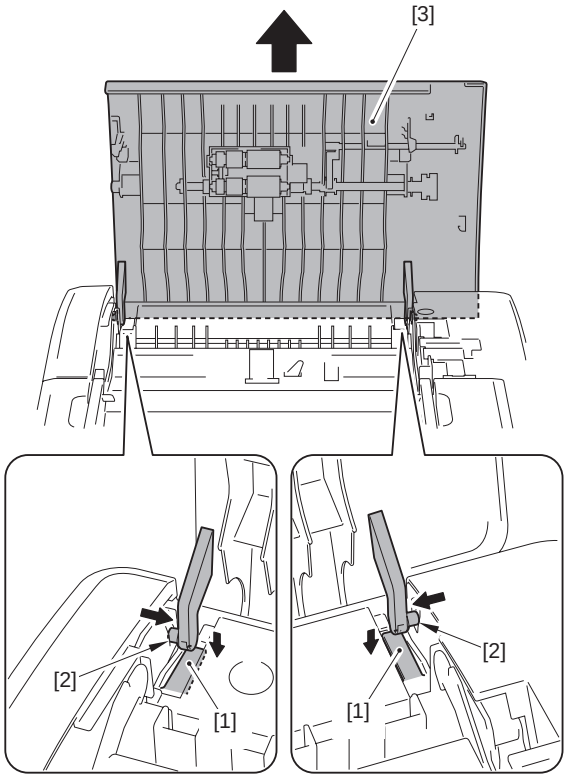
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Open the ADF upper cover [1].



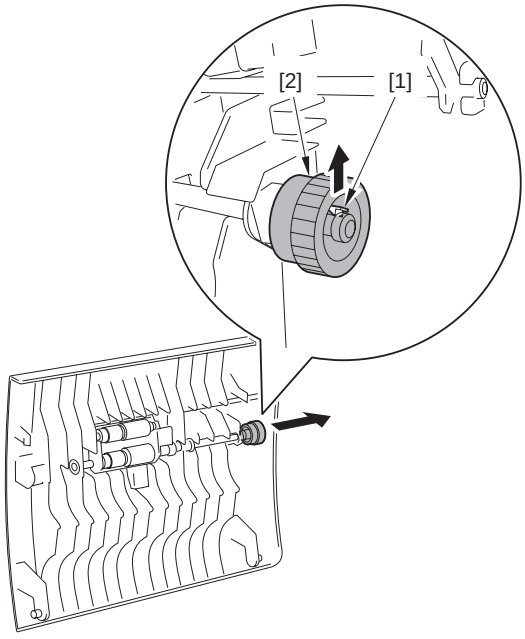
F-6-33

2) While pressing the shaft retainer [1], release the 2 shafts [2] and remove the ADF upper cover [3].



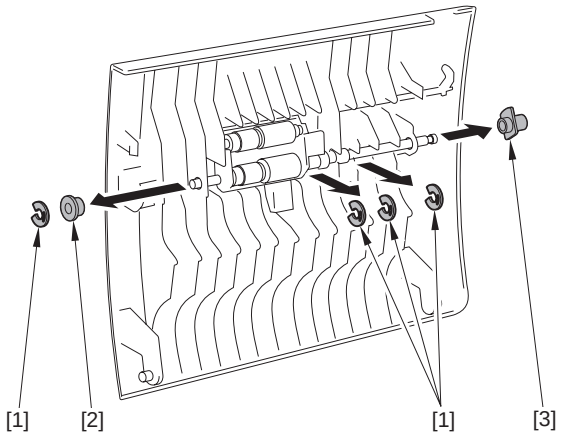
F-6-34

3) Release the claw [1] to remove the gear [2].



F-6-35

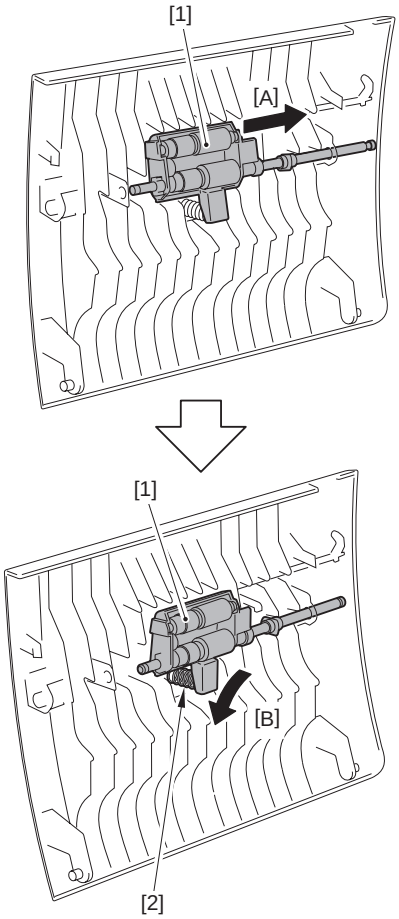
4) Remove the 4 grip-rings [1], the bushing [2] and the bushing [3].



F-6-36

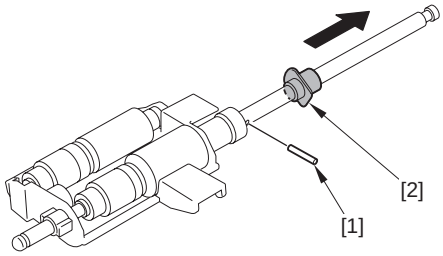
5) Move the ADF separation roller unit [1] in the direction of the arrow [A] to remove it from the ADF upper cover in the direction of the arrow [B].

> ⚠
> Do not loose the spring [2] when removing the ADF separation roller unit [1].



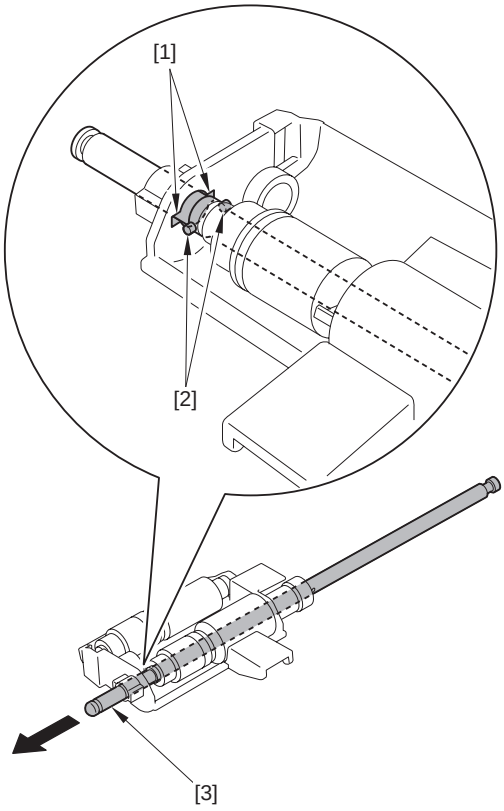
F-6-37

6) Remove the parallel pin [1] and the bushing [2].



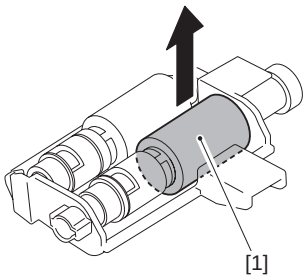
F-6-38

7) Fit the groove [1] of the ADF separation roller cover with the projection [2] of the ADF separation roller shaft to remove the ADF separation roller shaft [3].



F-6-39

8) Remove the ADF separation roller [1].



F-6-40

6.4.5 Pick-up Motor

6.4.5.1 Before Removing the ADF Pickup Motor

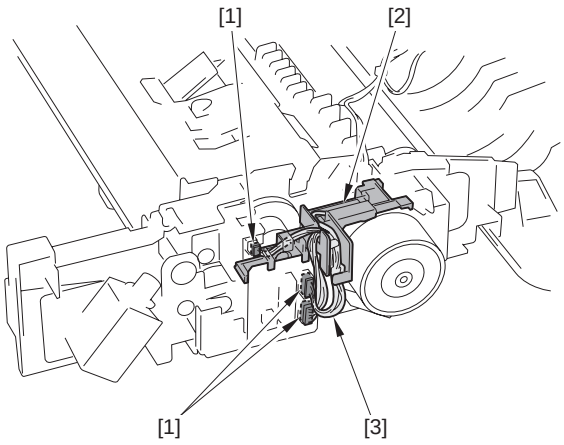
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ADF pickup feed unit.(page 6-8) Reference [Removing the ADF Pickup Feed Unit]

6.4.5.2 Removing the ADF Pickup Motor

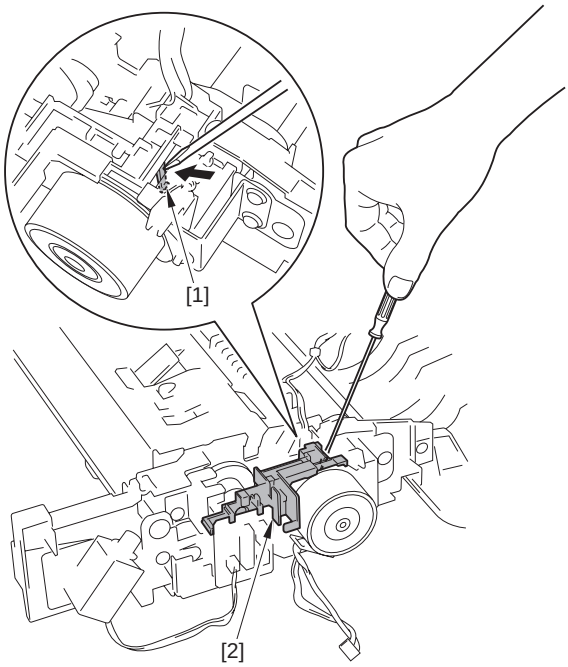
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Disconnect the 3 connectors [1] and free the harness [3] from the harness guide [2].



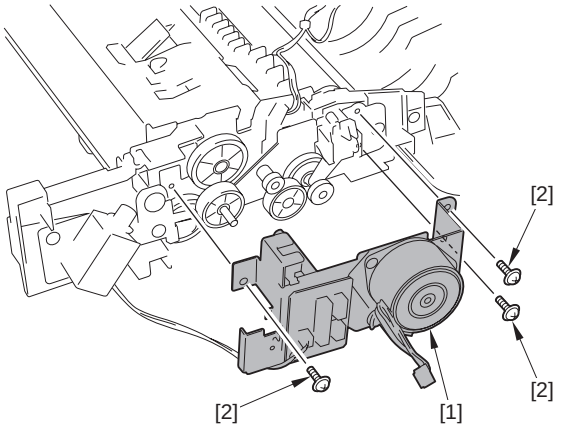
F-6-41

2) Remove the claw [1] to remove the harness guide [2].



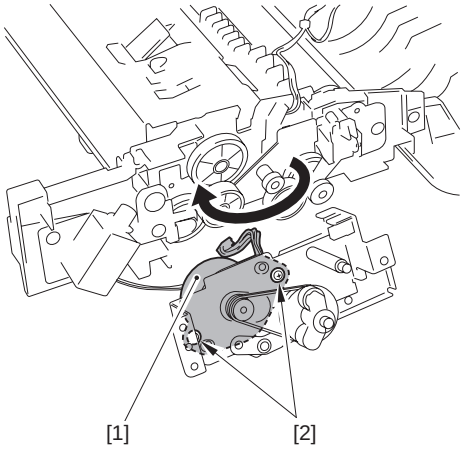
F-6-42

3) Remove the ADF pickup motor unit [1].
-3 screws [2]



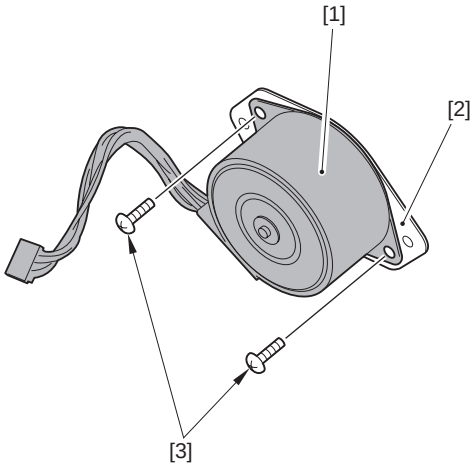
F-6-43

4) Turn over the ADF pickup motor unit.
5) Remove the ADF pickup motor [1].
- 2 screws [2]



F-6-44

6) Remove the fixing plate [2] from the ADF pickup motor [1].
- 2 screws [3]



F-6-45

6.4.6 Pick-up Solenoid

6.4.6.1 Before Removing the ADF Pickup Solenoid

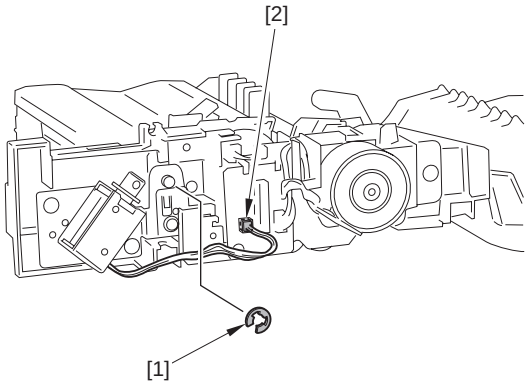
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ADF pickup feed unit.(page 6-8)Reference [Removing the ADF Pickup Feed Unit]

6.4.6.2 Removing the ADF Pickup Solenoid

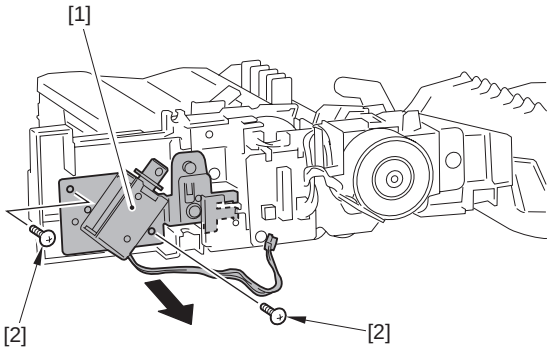
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the grip-ring [1] and disconnect the connector [2].



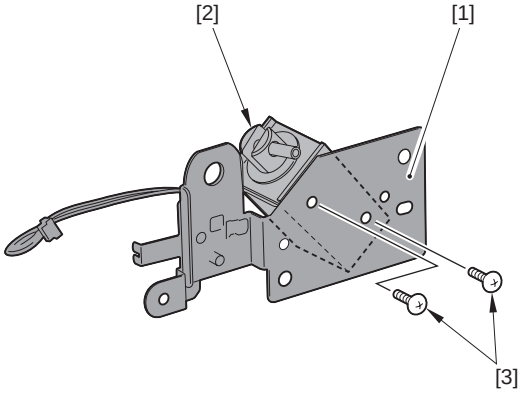
F-6-46

2) Remove the ADF pickup solenoid unit [1].
-2 screws [2]



F-6-47

3) Remove the ADF pickup solenoid [2] from the ADF pickup solenoid unit [1].
-2 screws [3]



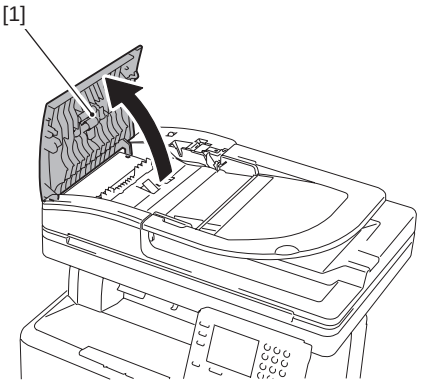
F-6-48

6.4.7 Separation Pad

6.4.7.1 Removing the ADF Separation Pad

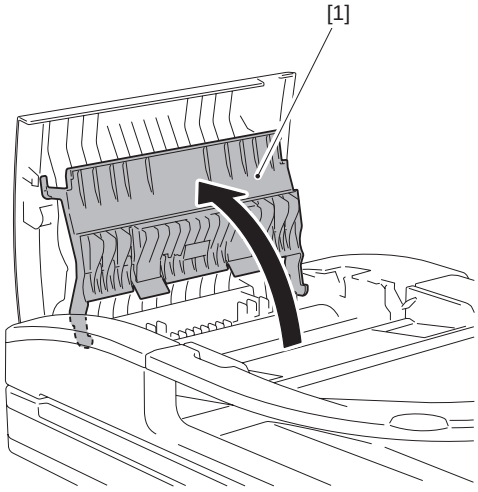
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Open the ADF upper cover [1].



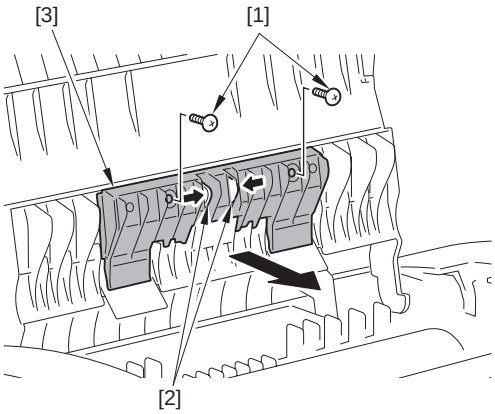
F-6-49

2) Open the inner guide [1].



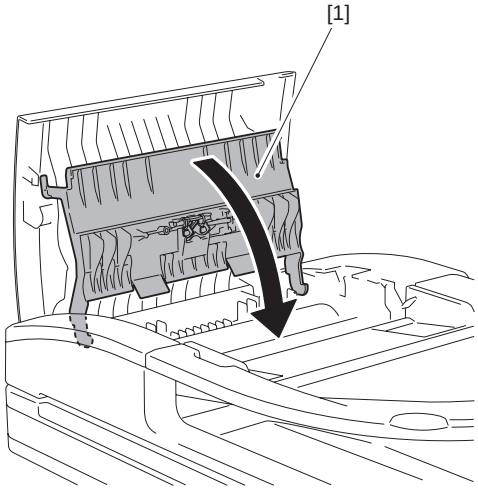
F-6-50

3) Remove the 2 screws [1].
4) Push the 2 claws [2] in the direction of the arrow [A] to remove the ADF separation claw cover [3].



F-6-51

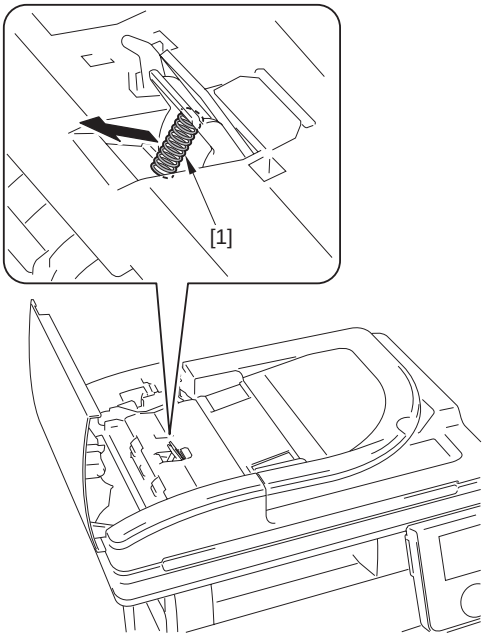
5) Close the inner guide [1].



F-6-52

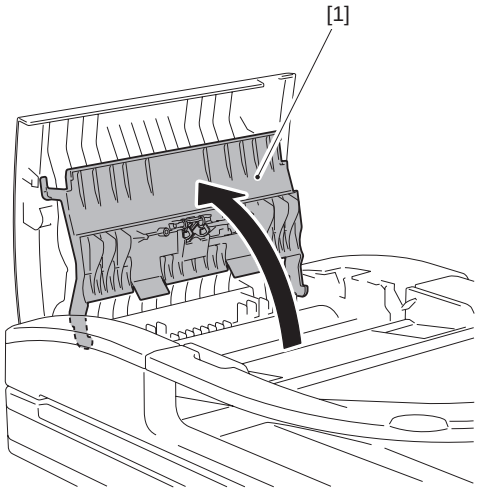
6) Remove the spring [1].

> ⚠
> Be careful not to lose the removed spring [1].



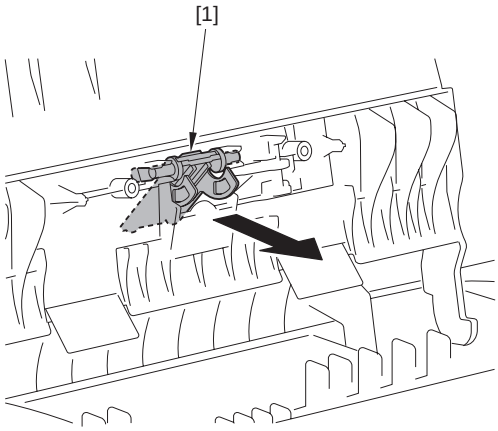
F-6-53

7) Open the inner guide [1].



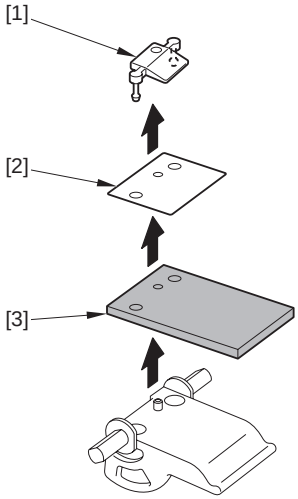
F-6-54

8) Remove the ADF separation pad unit [1].



F-6-55

9) Remove the separation pad fixing pin [1] and the sheet [2], and then remove the ADF separation pad [3].



F-6-56

Chapter 7 Laser Exposure

Contents

7.1 Overview/Configuration 7-1
7.1.1 Overview 7-1
7.1.2 Overview 7-3
7.2 Controlling the Laser 7-5
7.2.1 Overview 7-5
7.2.2 Overview 7-6
7.2.3 Laser Light Emission Control 7-7
7.2.4 Laser Light Intensity Control 7-7
7.2.5 Laser Light Intensity Control 7-7
7.2.6 Image Masking Control 7-7
7.2.7 Failure Detection 7-7
7.3 Controlling the Laser Scanner Motor 7-8
7.3.1 Overview 7-8
7.3.2 Failure Detection 7-8
7.4 Parts Replacement Procedure 7-9
7.4.1 Laser/Scanner Unit 7-9
7.4.1.1 Before Removing the Laser Scanner Unit 7-9
7.4.1.2 Removing the Laser Scanner Unit 7-9

7.1 Overview/Configuration

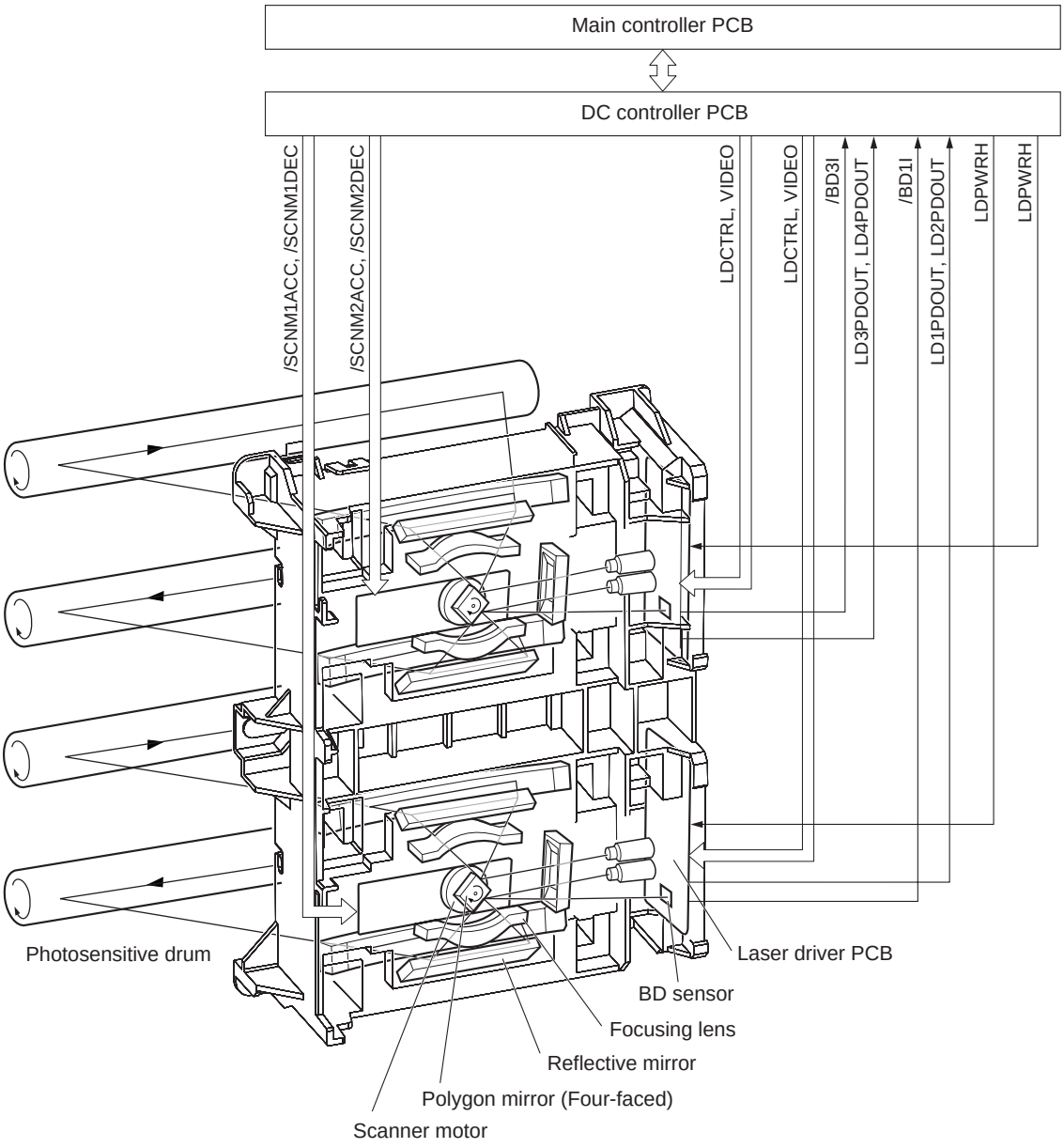
7.1.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i

The laser exposure system forms latent images on the photosensitive drum according to the video signals with the control by the DC controller.

The laser exposure system consists of the laser scanner unit.
The 2 laser driver PCBs, the 2 scanner motors, and the 2 polygon mirrors are installed on the laser scanner unit.
There are two (two colors of) laser diodes for one laser driver PCB. The laser beams of two colors emitted from the laser diode are reflected by one polygon mirror.

In this machine, the process speed varies according to the print mode. The rotational speed of the scanner motor and the laser light intensity are switched according to the process speed.



F-7-1

The following is the operational sequence at printing.
1) Upon reception of a print command from the main controller, the DC controller rotates the 2 scanner motors.
   The 2 polygon mirrors rotate in conjunction with the scanner motors.
2) The DC controller allows the laser diode on the laser driver PCB to emit light.
   The light of the laser diode (laser beam) is reflected by the polygon mirror and received by the BD sensor on the laser driver PCB.
3) The laser driver PCB outputs the /BD input signals (/BD1I, /BD3I) to the DC controller PCB.
4) The DC controller monitors the rotational speed of the scanner motor with the /BDI signals input timing to control the scanner motor to rotate at constant speed.
   When the scanner motor rotates at constant speed, the DC controller outputs the video signals sent from the main controller to the laser driver PCB.
5) In the laser driver PCB, the laser diode is emitted depending on the video signals and the laser beam is radiated.
6) The laser beams are reflected by the polygon mirror rotating at the constant speed, and reach the photosensitive drum via the focusing lens and the reflection mirror.
   The focusing lens corrects the route of the laser beam to maintain the constant scanning speed on the photosensitive drum.
7) When the photosensitive drum rotates at constant speed and the laser beams scan vertically to its rotation, a latent image is formed on the drum.

MEMO:

- Only one /BDI signal is generated per scanner motor.
  The /BDI signals of the scanner motor for M/C is generated based on the M laser reflected light, and the /BDI signals of the scanner motor for Y/Bk is generated based on the Y laser reflected light.
  The DC controller generates the /BDI signals for four colors according to these /BDI signals and send them to the main controller.
- The machine scans two lines with one polygon mirror. Therefore the scanning direction depends on the color. (The direction for M/Y is right-end write start scanning direction and that for C/Bk is left-end write start scanning direction relative to the print side of paper.)

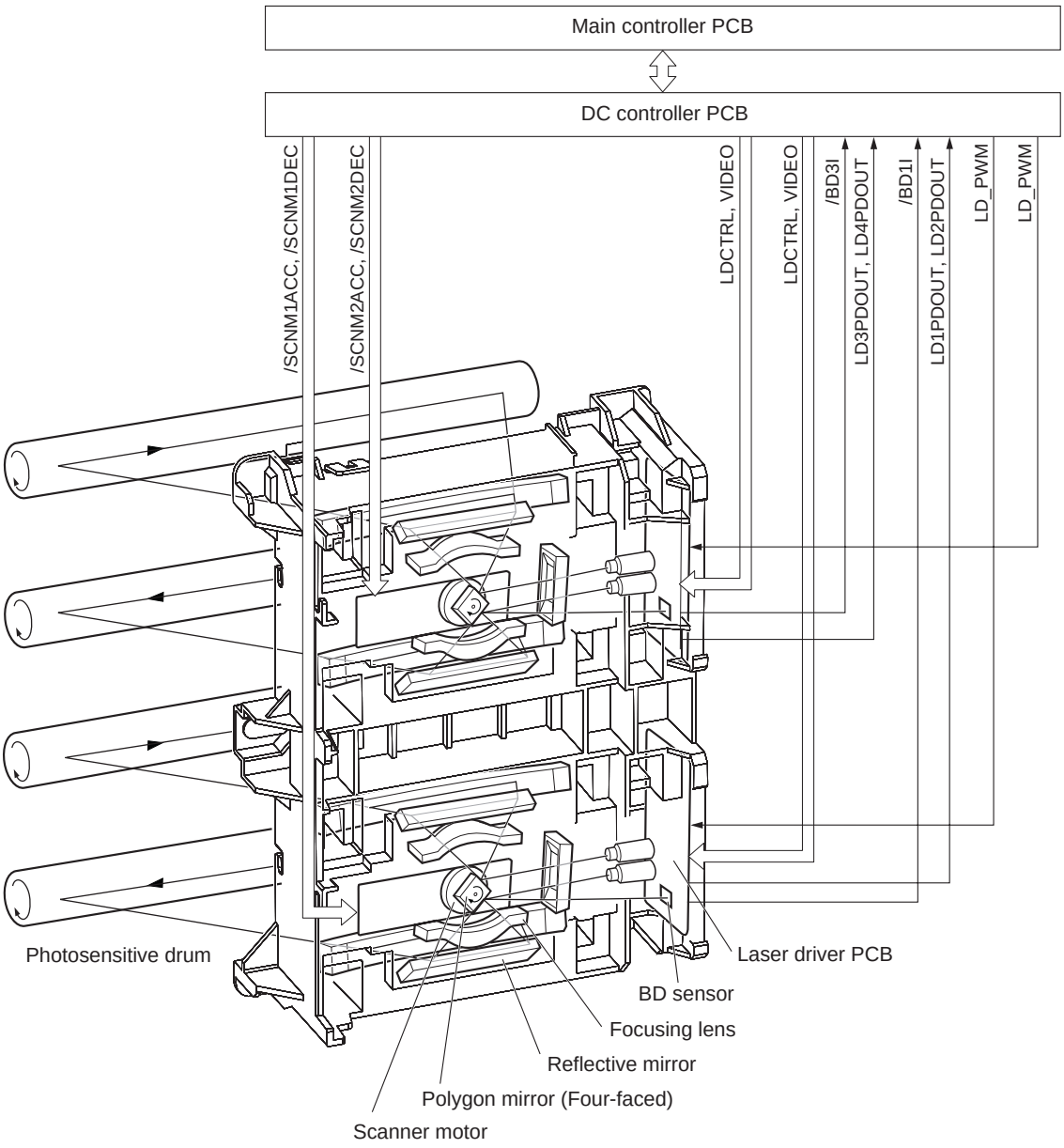
7.1.2 Overview

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The laser exposure system forms latent images on the photosensitive drum according to the video signals with the control by the DC controller.

The laser exposure system consists of the laser scanner unit.
The 2 laser driver PCBs, the 2 scanner motors, and the 2 polygon mirrors are installed on the laser scanner unit.
There are two (two colors of) laser diodes for one laser driver PCB. The laser beams of two colors emitted from the laser diode are reflected by one polygon mirror.

In this machine, the process speed varies according to the print mode. The rotational speed of the scanner motor and the laser light intensity are switched according to the process speed.



F-7-2

The following is the operational sequence at printing.
1) Upon reception of a print command from the main controller, the DC controller rotates the 2 scanner motors.
   The 2 polygon mirrors rotate in conjunction with the scanner motors.
2) The DC controller allows the laser diode on the laser driver PCB to emit light.
   The light of the laser diode (laser beam) is reflected by the polygon mirror and received by the BD sensor on the laser driver PCB.
3) The laser driver PCB outputs the /BD input signals (/BD1I, /BD3I) to the DC controller PCB.
4) The DC controller monitors the rotational speed of the scanner motor with the /BDI signals input timing to control the scanner motor to rotate at constant speed.
   When the scanner motor rotates at constant speed, the DC controller outputs the video signals sent from the main controller to the laser driver PCB.
5) In the laser driver PCB, the laser diode is emitted depending on the video signals and the laser beam is radiated.
6) The laser beams are reflected by the polygon mirror rotating at the constant speed, and reach the photosensitive drum via the focusing lens and the reflection mirror.
   The focusing lens corrects the route of the laser beam to maintain the constant scanning speed on the photosensitive drum.
7) When the photosensitive drum rotates at constant speed and the laser beams scan vertically to its rotation, a latent image is formed on the drum.

MEMO:

- Only one /BDI signal is generated per scanner motor.
  The /BDI signals of the scanner motor for M/C is generated based on the M laser reflected light, and the /BDI signals of the scanner motor for Y/Bk is generated based on the Y laser reflected light.
  The DC controller generates the /BDI signals for four colors according to these /BDI signals and send them to the main controller.
- The machine scans two lines with one polygon mirror. Therefore the scanning direction depends on the color. (The direction for M/Y is right-end write start scanning direction and that for C/Bk is left-end write start scanning direction relative to the print side of paper.)

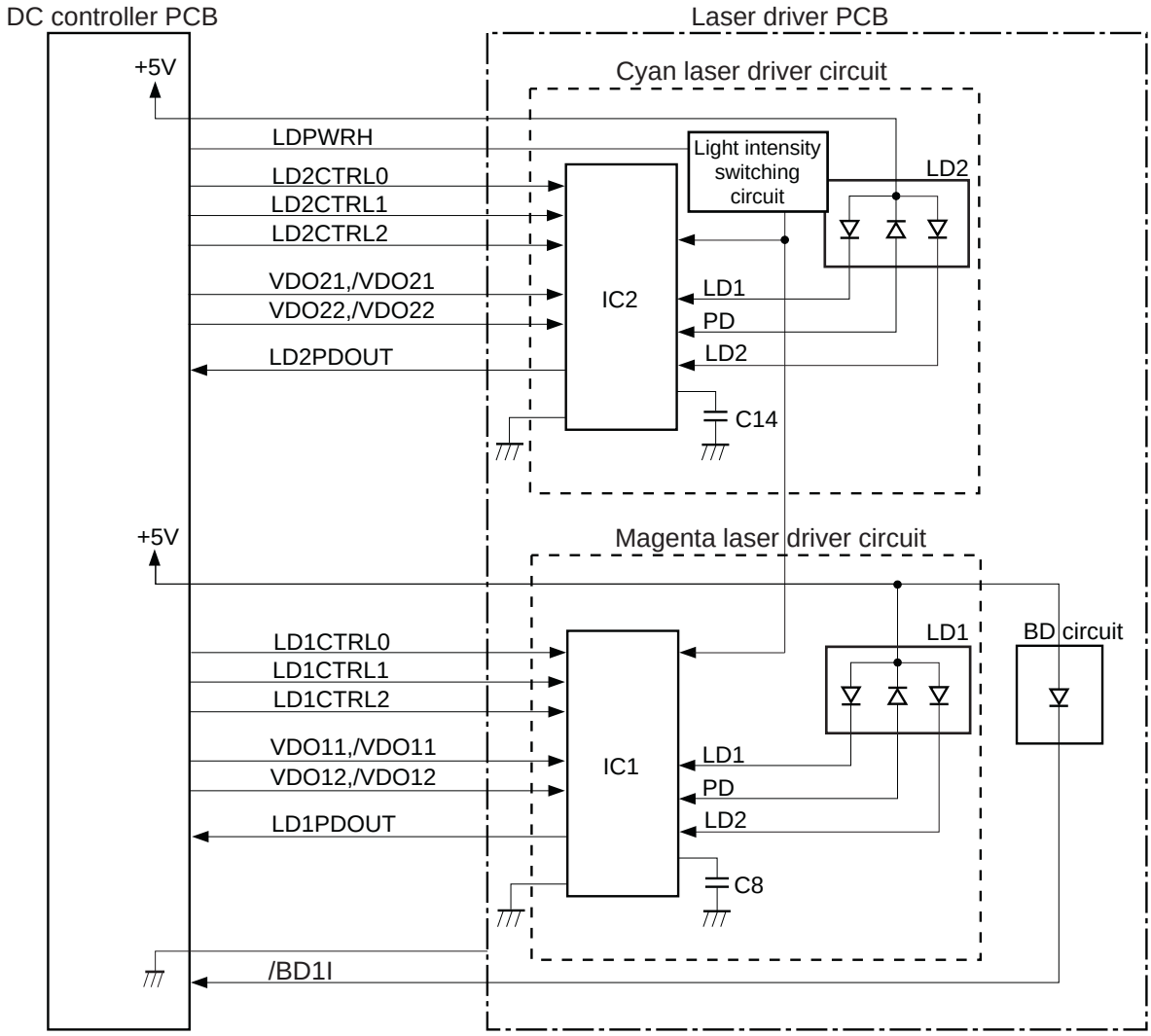
7.2 Controlling the Laser

7.2.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i

The laser control is to allow the laser driver to turn the laser diode ON/OFF according to the laser control signals sent from the DC controller. There are two laser driver PCBs: one is for M/C and the other is for Y/Bk. The configurations of both PCBs are identical.

In the case of the laser driver for M/C



F-7-3

The DC controller sends the following signals to each laser driver IC (IC1, IC2).
- video signals (VDO, /VDO) for the image formation
- laser control signals (CTRL 0 to 2) for switching the operational mode of the laser driver circuit
- laser light intensity switch signal (LDPWRH) for switching the laser light intensity

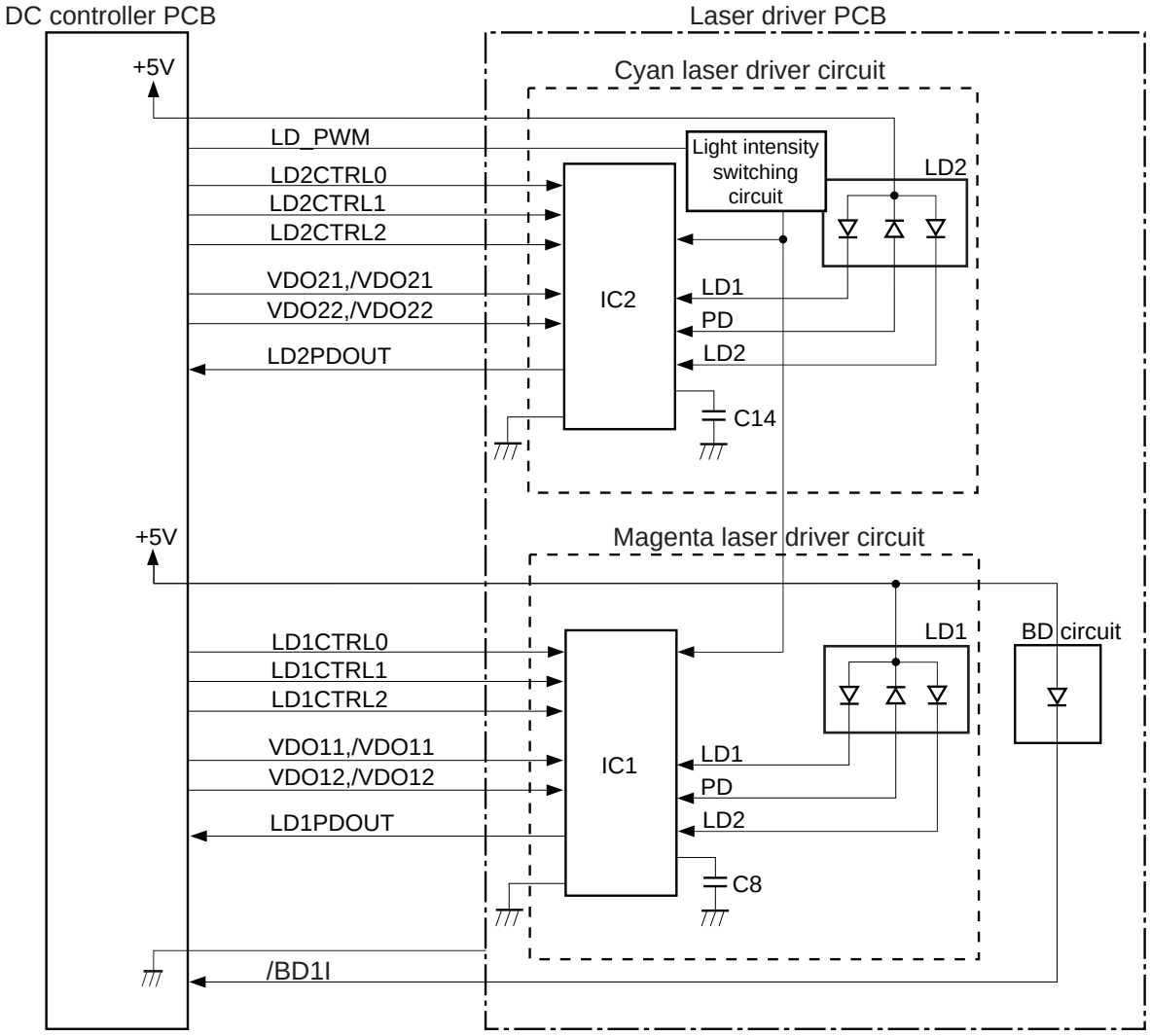
The laser driver IC controls the laser according to the combination of the laser control signals.

7.2.2 Overview

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The laser control is to allow the laser driver to turn the laser diode ON/OFF according to the laser control signals sent from the DC controller. There are two laser driver PCBs: one is for M/C and the other is for Y/Bk. The configurations of both PCBs are identical.

In the case of the laser driver for M/C



F-7-4

The DC controller sends the following signals to each laser driver IC (IC1, IC2).
- video signals (VDO, /VDO) for the image formation
- laser control signals (CTRL 0 to 2) for switching the operational mode of the laser driver circuit
- laser light intensity switch signal (LD_PWM) for switching the laser light intensity

The laser driver IC controls the laser according to the combination of the laser control signals.

7.2.3 Laser Light Emission Control

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

In this machine, the laser diode ON/OFF is controlled according to the laser light emission mode.
The laser light emission mode is determined based on the combination of the laser control signals (LD_CTL 0 to 2) that is output by the DC controller.
The laser driver IC receives the laser control signals from the DC controller and emits the laser diode according to the laser light emission mode.

7.2.4 Laser Light Intensity Control

imageRUNNER C1022 / imageRUNNER C1022i

In this machine, the laser light intensity is switched according to the rotational speed of the scanner motor.
The laser light intensity switch signal (LDPWRH) that is output by the DC controller controls switching the laser light intensity.
The laser driver IC receives the laser light intensity switch signal from the DC controller and switches the laser light intensity.

MEMO:
The process speed varies according to the paper type. (See 'Feed Speed Control' in Pickup and Feed System.)
When changing the process speed, the rotational speed of the scanner motor needs to be changed. If not switching the laser light intensity, a fault in image density may occur.

7.2.5 Laser Light Intensity Control

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

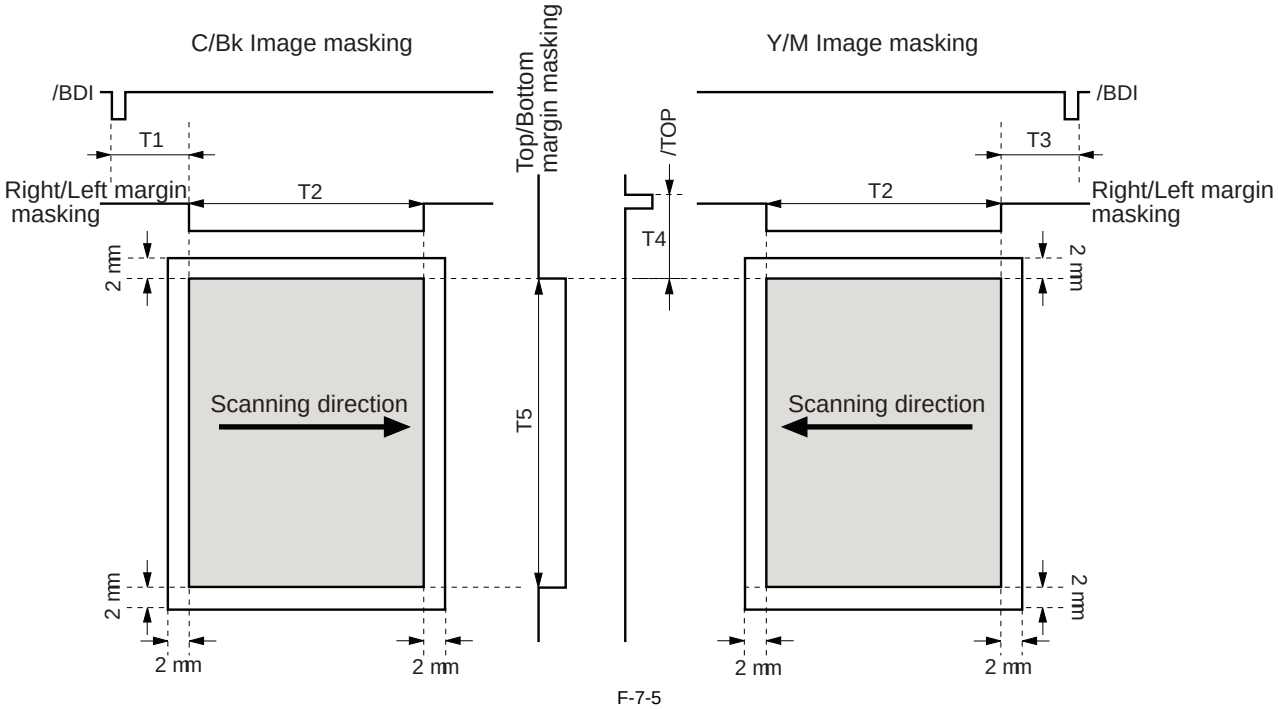
In this machine, the laser light intensity is switched according to the rotational speed of the scanner motor.
The laser light intensity switch signal (LD_PWM) that is output by the DC controller controls switching the laser light intensity.
The laser driver IC receives the laser light intensity switch signal from the DC controller and switches the laser light intensity.

MEMO:
The process speed varies according to the paper type. (See 'Feed Speed Control' in Pickup and Feed System.)
When changing the process speed, the rotational speed of the scanner motor needs to be changed. If not switching the laser light intensity, a fault in image density may occur.

7.2.6 Image Masking Control

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

In the DC controller, the image masking control is performed to regulate laser beam emission in non-image area that BD detection is not performed on.
The DC controller puts the laser driver circuit into LD forced OFF mode while the laser beam scans the non-image area that BD detection is not performed on. This is called the image masking status, and the laser diode does not emit light even if the video signals are sent because it is forcedly OFF in LD forced Off mode.
The timing to start the image masking control depends on the paper size information that DC controller receives from the main controller. (There is no cassette paper size detection function in this equipment.)



F-7-5

- The colored area indicates the area where an image can be scanned by the laser beam.
- The times T1, T2, T3, T4 and T5 depend on the paper size.
- The T1 time depends on the color.
- If the main controller does not specify the paper size with a paper size command at manual feed pickup operation, the printer cannot detect the paper width. In such a case, the T1 to T3 are automatically set for letter size but T5 is set according to the paper length detected by the manual feed paper sensor (SR707).

7.2.7 Failure Detection

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

In the DC controller, the failure in the laser diode is detected.
The laser driver IC converts the laser current of the laser diodes into voltage value (laser current output signal: PDOUT) during the initial APC period and sends it to the DC controller.
If the voltage value equivalent to the laser current output signal is below the specified value, the DC controller presumes the laser diode failure, stops the printer engine, and displays "E100 (optical unit failure)" on the control panel.

7.3 Controlling the Laser Scanner Motor

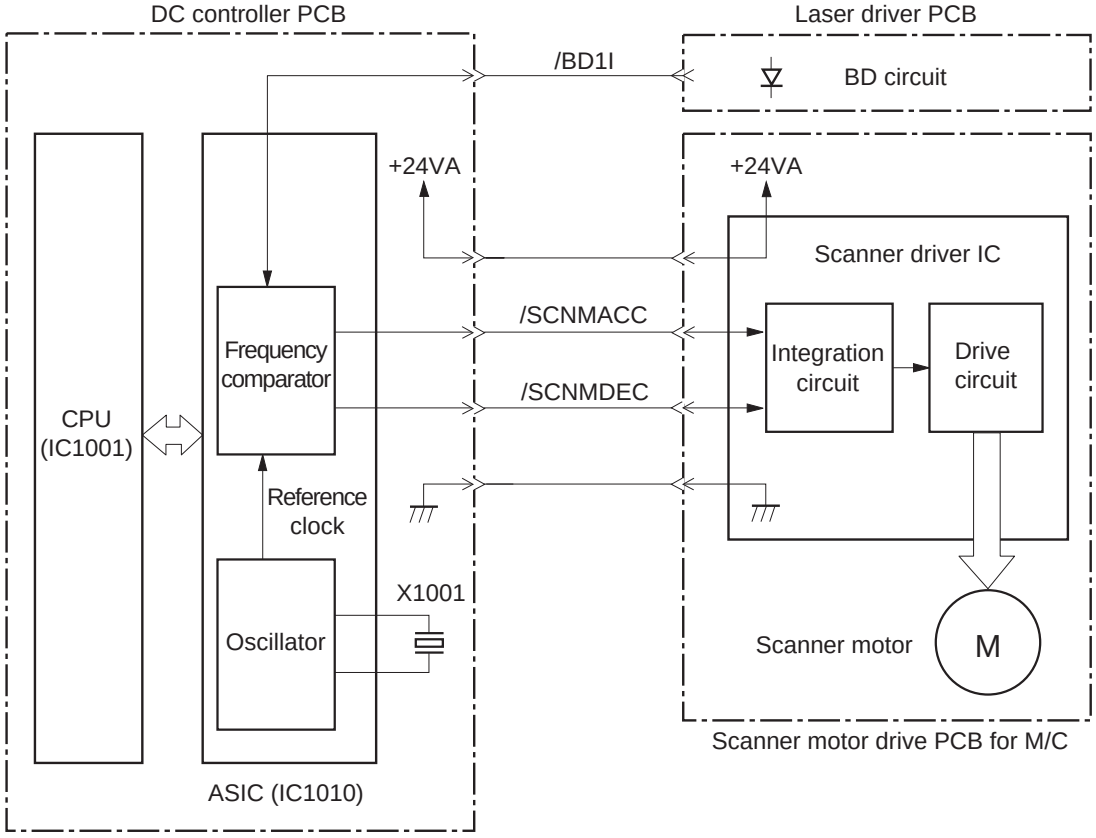
7.3.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

In the DC controller, the scanner motor control is performed to emit the laser beam at the correct position on the photosensitive drum.
The scanner motor control is to rotate the scanner motor at its specified speed and phase.

- Speed control
  The scanner motor is rotated at a specified speed.
- Phase control
  The phase difference of the 2 polygon mirrors is adjusted while the scanner motor is rotating at a low speed to eliminate line displacement attributed to the rotation and prevent color displacement in the sub scanning direction.

There are two scanner motors: one is for M/C and the other is for Y/Bk. The configurations of both motors are identical.



F-7-6

The DC controller PCB generates the reference clock based on the oscillation frequency of the oscillator (X1001).
It compares the intervals between the reference clock and the BD input signal (/BD1I) sent from the laser driver PCB with the frequency comparator, and monitors the rotational counter of the scanner motor.
It controls the rotational speed of the scanner motor by sending the scanner motor acceleration signal (/SCNMACC) or the scanner motor deceleration signal (/SCNMDEC) to the scanner motor driver based on the detected rotational speed.

7.3.2 Failure Detection

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

In the DC controller, the fault in the scanner motor is detected.
The CPU (IC1001) monitors the frequency comparator in the ASIC (IC1010) and determines whether the scanner motor rotates at its specified rotational speed or not.
When the CPU encounters the following conditions, it determines the scanner motor failure, stops the printer engine, and displays 'E100 (optical unit failure)" on the control panel.

- Abnormal scanner motor
  The scanner motor does not enter scanner ready mode within 5 seconds of scanner motor start-up.
- BD error
  - The /BDI signal cannot be detected within 1.5 seconds of once the scanner motor reached at its specified rotational speed.
  - The interval of the /BDI signal goes out of the tolerance for 0.5 second continuously after the scanner motor once reached at its specified rotational speed.

7.4 Parts Replacement Procedure

7.4.1 Laser/Scanner Unit

7.4.1.1 Before Removing the Laser Scanner Unit

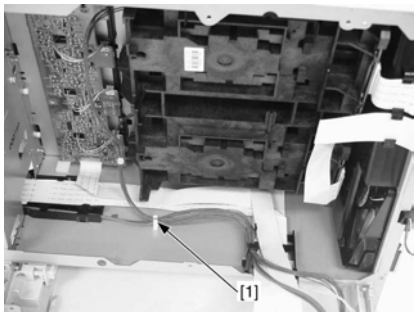
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12)Reference [Removing the Rear Cover Unit]
3) Remove the left cover.(page 11-14)Reference [Removing the Left Cover]
4) Remove the right cover.(page 11-12)Reference [Removing the Right Cover]
5) Remove the Electrical Components Cover.(page 11-16)Reference [Removing the Electrical Components Cover]
6) Remove the Controller Box.(page 11-16)Reference [Removing the Controller Box]
7) Remove the Off Hook PCB. (only of the machine with FAX)(page 11-27)Reference [Removing the Off Hook PCB]
8) Remove the DC Controller PCB.(page 11-24)Reference [Removing the DC Controller PCB]
9) Remove the Laser Scanner Cover.(page 11-17)Reference [Removing the Laser Scanner Cover]

7.4.1.2 Removing the Laser Scanner Unit

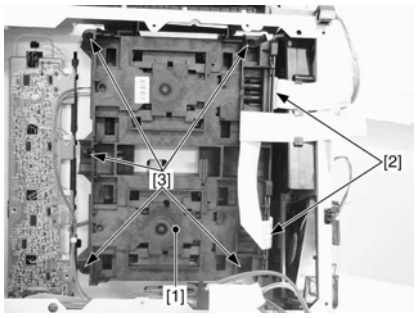
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Free the cable from the wire saddle [1].



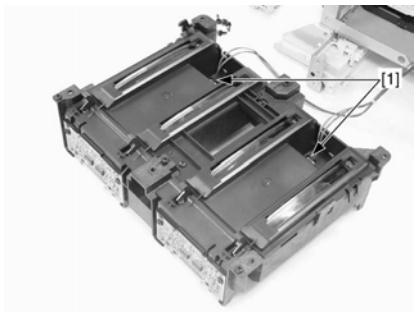
F-7-7

2) Remove the laser scanner unit [1].
- 2 flat cables [2]
- 5 screws [3]



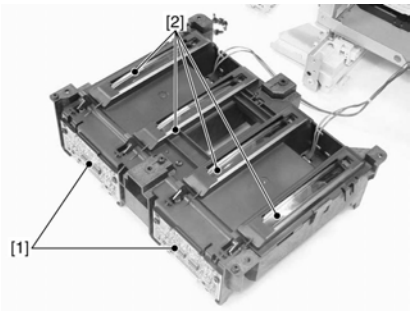
F-7-8

3) Disconnect the 2 connectors [1]



F-7-9

⚠
- Do not disassemble the laser scanner unit in the field.
Disassembling it may cause a functional fault.
- When holding the laser scanner unit, be careful not to touch the laser PCB [1] and the lens [2].



Chapter 8 Image Formation

Contents

8.1 Overview/Configuration 8-1
8.1.1 Overview 8-1
8.1.2 Print Process 8-2
8.1.3 Electrostatic Latent Image Formation Block 8-3
8.1.4 Development Block 8-4
8.1.5 Transfer Block 8-4
8.1.6 Fixing Block 8-6
8.1.7 Cleaning Block 8-6
8.2 Image Stabilization Control 8-7
8.2.1 Overview 8-7
8.2.2 Environmental Change Corrective Control 8-8
8.2.3 D-half Control 8-9
8.2.4 Color Displacement Corrective Control 8-11
8.2.5 Auto Gradation Correction Control 8-13
8.3 Toner Cartridge 8-14
8.3.1 Overview 8-14
8.3.2 Toner Level Detection 8-15
8.3.3 Memory Tag Control 8-15
8.3.4 Toner Cartridge Detection 8-15
8.3.5 New Toner Cartridge Detection 8-16
8.3.6 Developing Cylinder Engagement/disengagement Control 8-17
8.4 Transfer Unit 8-18
8.4.1 ETB Unit 8-18
8.4.2 Automatic Bias Control 8-19
8.4.3 ETB Cleaning 8-20
8.4.4 Transfer Roller Engagement/disengagement Control 8-21
8.5 Parts Replacement Procedure 8-25
8.5.1 Drum Motor 8-25
8.5.1.1 Before Removing the Drum Motor 8-25
8.5.1.2 Removing the Drum Motor 8-25
8.5.2 Main Drive Unit 8-25
8.5.2.1 Before Removing the Main Drive Unit 8-25
8.5.2.2 Removing the Main Drive Unit 8-25
8.5.2.3 Point to Note When Installing the Main Drive Unit 8-27
8.5.3 Developing Estrangement Solenoid 8-29
8.5.3.1 Before Removing the Developing Disengage Solenoid 8-29
8.5.3.2 Removing the Developing Disengage Solenoid 8-29
8.5.3.3 Points to Note When Installing the Developing Disengage Solenoid 8-30
8.5.4 ETB Unit 8-30
8.5.4.1 Removing the ETB Unit 8-30
8.5.5 ETB Motor 8-31
8.5.5.1 Before Removing the ETB Motor 8-31
8.5.5.2 Removing the ETB Motor 8-31
8.5.6 ETB Estrangement Solenoid 8-32
8.5.6.1 Before Removing the ETB Disengage Solenoid 8-32
8.5.6.2 Removing the ETB Disengage Solenoid 8-32
8.5.7 Color Displacement/Image Density Sensor 8-33
8.5.7.1 Before Removing the Color Displacement/Density Sensor 8-33
8.5.7.2 Removing the Color Displacement/Density Sensor 8-33

8.1 Overview/Configuration

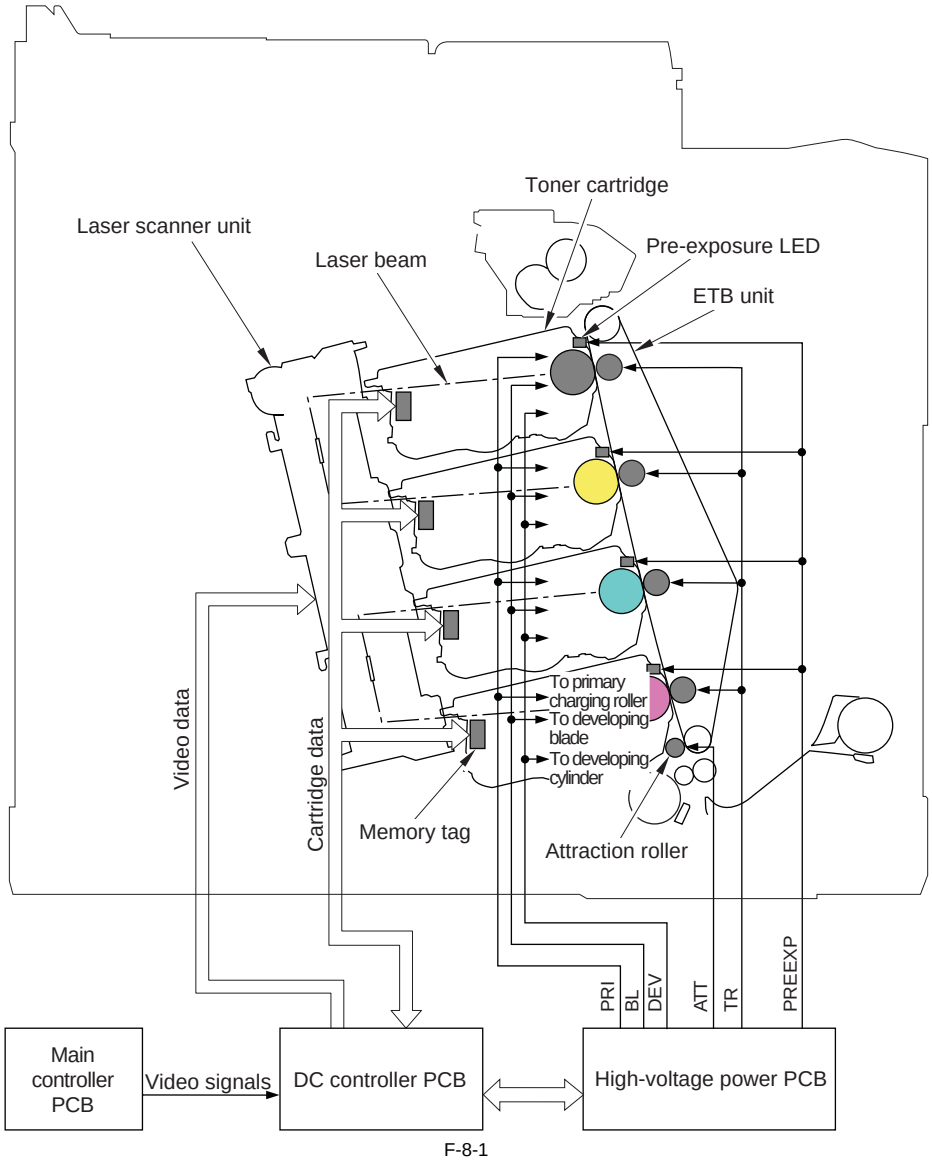
8.1.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The image formation system forms a toner image on paper, which is controlled by the DC controller. It consists of four toner cartridges and the ETB unit, etc.

The DC controller controls the laser scanner unit, and forms an electrostatic latent image on the photosensitive drum based on the video signal received from the main controller. At the same time, it controls the high-voltage power PCB, makes toner adhere to the electrostatic latent image, and then transfers it on paper.

A memory tag, which saves cartridge data, is built in the toner cartridge for each color. The DC controller detects the use condition of the toner cartridge by reading/writing the memory tag.



F-8-1

8.1.2 Print Process

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The print process is performed in 10 steps with five blocks.
A toner image is formed on paper when the steps in each block are executed in sequence.

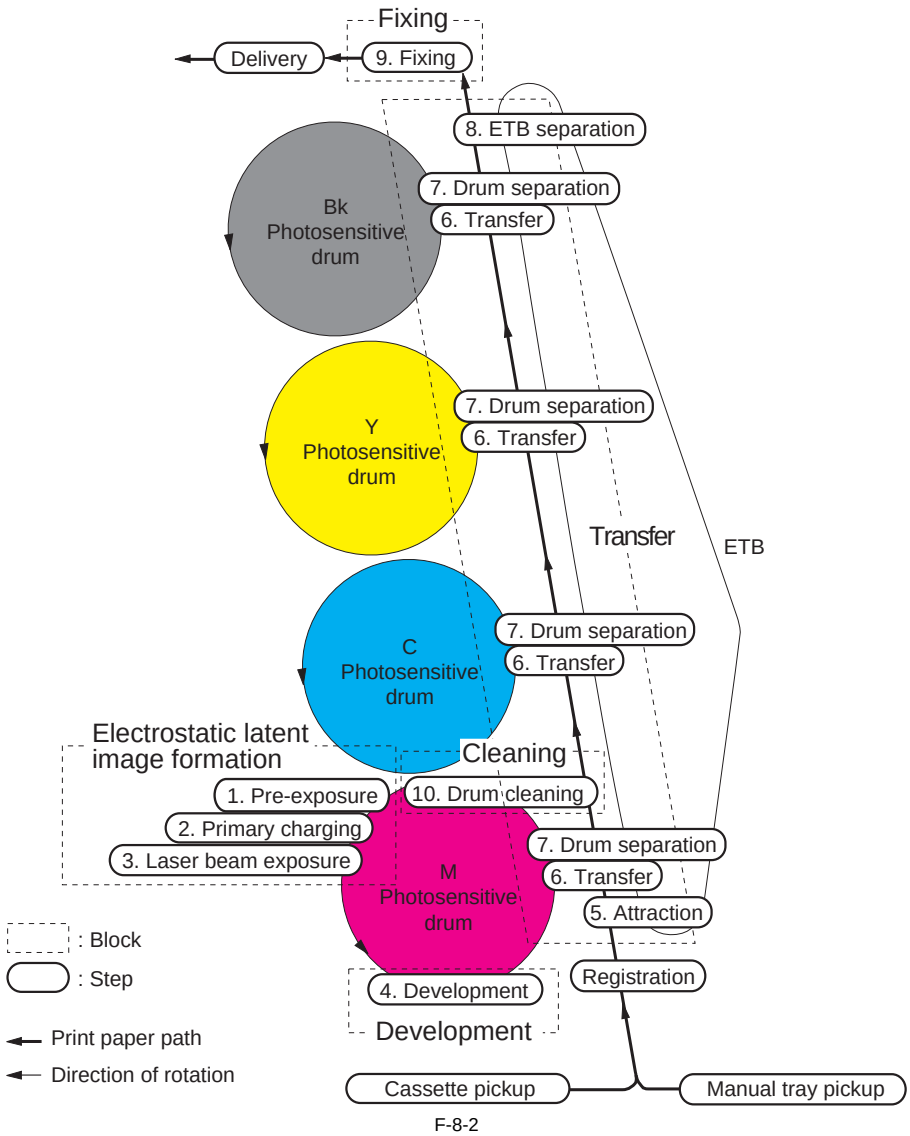
1. Electrostatic latent image formation block
To form an electrostatic latent image on the photosensitive drum
Step 1: Pre-exposure
Step 2: Primary charging
Step 3: Laser beam exposure

2. Development block
To make the electrostatic latent image visible on the photosensitive drum surface with the contact development method
Step 4: Development

3. Transfer block
To transfer toner on the photosensitive drum to paper
Step 5: Attraction
Step 6: Transfer
Step 7: Drum separation
Step 8: ETB separation

4. Fixing block
To fix toner on paper
Step 9: Fixing

5. Cleaning block
To remove the residual toner on the photosensitive drum
Step 10: Drum cleaning



F-8-2

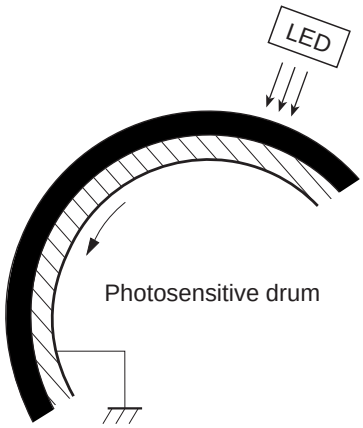
8.1.3 Electrostatic Latent Image Formation Block

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

In this block, an electrostatic latent image is formed on the photosensitive drum by following three steps.

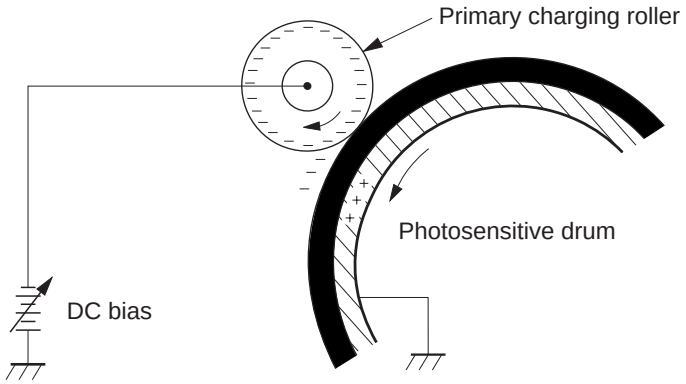
When a laser beam scans the photosensitive drum charged with a negative potential, an image with negative charge is formed on the photosensitive drum. This image is called "an electrostatic latent image" because it is invisible to human eyes.

Step 1: Pre-exposure
As a preparation for the primary charging, the LED light of the pre-exposure LED is exposed on the photosensitive drum surface. This eliminates the residual charge on the drum surface in order to avoid image density unevenness.



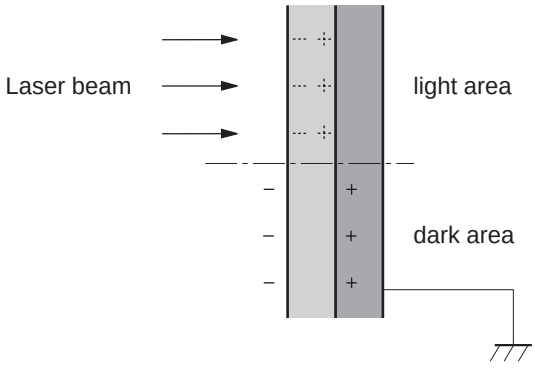
F-8-3

Step 2: Primary charging
As a preparation for the latent image formation, the surface of the photosensitive drum is changed with a uniform negative potential.
The machine charges the photosensitive drum with negative charge directly from the primary charging roller, which is interlocked with the drum.
The primary charging roller is made of a conductive rubber, and a negative DC bias is applied to the roller.



F-8-4

Step 3: Laser beam exposure
The latent image is formed on the photosensitive drum by a laser beam.
When a laser beam is exposed on the photosensitive drum, the potential on the exposed area (light area) is neutralized and the negative potential is removed from the drum surface. This area forms electrostatic latent images. A negative potential remains in the area where a laser beam was not exposed (dark area).



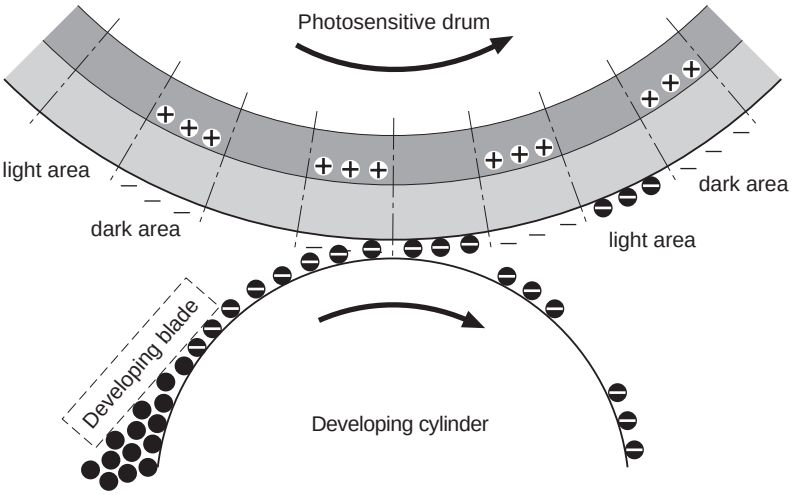
F-8-5

8.1.4 Development Block

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

In this block, toner is adhered to the electrostatic latent image on the photosensitive drum to make it visible by the contact development method.
In the contact development method, the developing cylinder is closely engaged with the photosensitive drum. Development is performed when toner is transferred from the developing cylinder to the photosensitive drum.
The toner (developer) used in the machine is a non-magnetic single-component toner, composed of resins, etc.

Step 4: Development
On the surface of the developing cylinder, toner is leveled by the developing blade to make an even layer of toner.
In this condition, the toner is charged negative due to the friction between the developing blade and the rotating developing cylinder, and the surface of the developing cylinder is charged negative.
Since the potential on the developing cylinder surface is lower than the light area on the photosensitive drum, the toner is separated from the developing cylinder at the area where the photosensitive drum is engaged with the developing cylinder, and is adhered to the light area of the photosensitive drum. This makes the electrostatic latent image on the photosensitive drum visible.
Since the potential in the dark area on the photosensitive drum is lower than the potential on the developing cylinder surface, the toner is not separated from the developing cylinder.



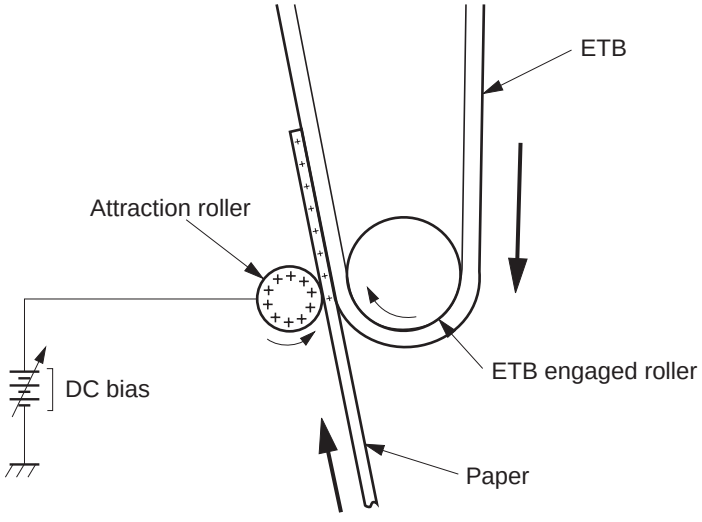
F-8-6

8.1.5 Transfer Block

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

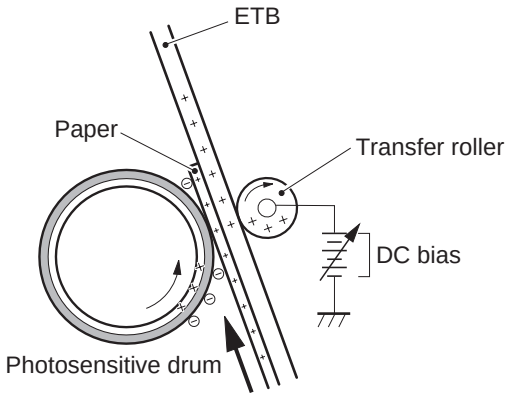
In this block, the toner on the photosensitive drum is transferred to paper, following four steps.

Step 5: Attraction
Paper is adhered to the ETB.
Since the machine transports paper upward, the paper is attracted to the ETB by electrostatic force so that it is not displaced from the feed path.
The fed paper is charged positive by the attraction roller, and is transported while being adhered to the ETB.
A positive DC bias is applied to the attraction roller.



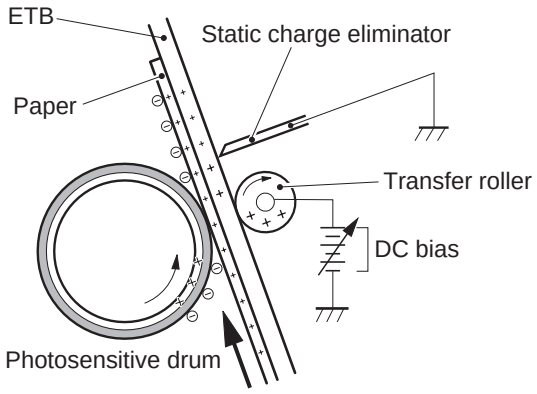
F-8-7

Step 6: Transfer
The toner on the photosensitive drum is transferred to paper.
The transfer roller is located at the opposite side of the photosensitive drum across the ETB. A positive DC bias is applied to the transfer roller.
Since the ETB is charged positive by the transfer roller, the negative-charged toner on the photosensitive drum is transferred to the paper.
This process is executed in the order of M, C, Y, and Bk.



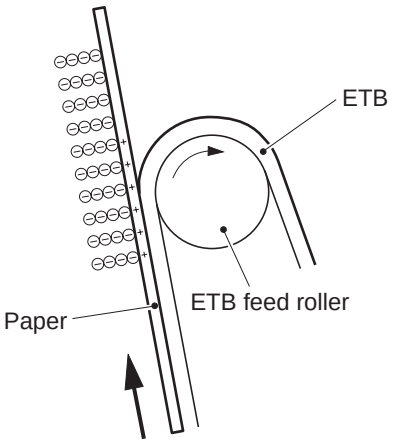
F-8-8

Step 7: Drum separation
The paper is separated from the photosensitive drum by its own elastic force (curvature separation).
There is also a static charge eliminator at the downstream of the transfer roller. It decreases the static charge on the ETB to stabilize paper feed operation.



F-8-9

Step 8: ETB separation
The paper is separated from the ETB by the elasticity of paper and the curvature of the ETB feed roller.



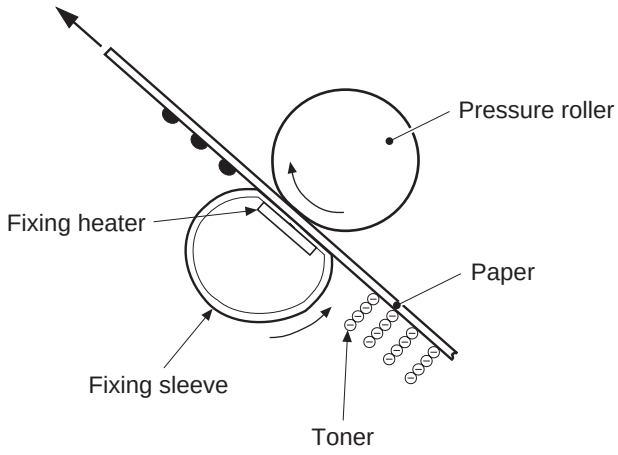
F-8-10

8.1.6 Fixing Block

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

In this block, a toner image is fixed on paper.
The toner image transferred to the paper can be smeared easily by hands since it is only attracted to the paper by a static electricity.
When pressure and heat are applied to the paper and toner image, the toner image melts with mixed colors and becomes a permanent printed image (on-demand fixing).

Step 9: Fixing
When the paper with toner is transported between the fixing sleeve and the pressure roller, the toner is melted by heat and fixed to the paper by pressure.
For the fixing heater, the machine uses a ceramic heater with lower heat, which warms up quickly. The feature of this heater is that the wait time is short and thus energy saving is realized.



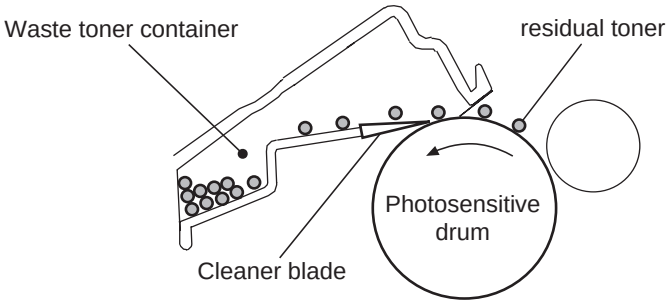
F-8-11

8.1.7 Cleaning Block

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

In this block, the residual toner on the photosensitive drum is removed.
When transfer is performed, a part of the toner image on the photosensitive drum is not sometimes transferred and remains on the drum. This remaining toner is called residual toner.
Removing the residual toner keeps a clear image in the subsequent print operation.

Step 10: Drum cleaning
The residual toner on the photosensitive drum is scraped by the cleaner blade, and then collected into the waste toner container.



F-8-12

8.2 Image Stabilization Control

8.2.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The quality of a printed image is affected by changes in environmental condition where the machine is installed or changes in the characteristics of the photosensitive drum and toner.
The machine performs the following controls according to necessity to stabilize print operation.

- Environmental change corrective control
  To correct values of primary charging biases and developing biases based on the result of detection performed by the environment sensor. This is comparable to a conventional D-max control.

- D-half control
  To correct the gradation data in the main controller PCB based on the result of detection performed by the color displacement/density sensor

- Color displacement corrective control
  To correct the timing of sending a video signal based on the result of detection performed by the color displacement/density sensor.

- Auto gradation correction control
  To make a stable gradation density feature of image, customers need to execute any of full correction, quick correction or copy image correction.

Timing of execution of each control

T-8-1

No.	Execution timing	Operation time	Environmental change corrective control	D-half control	Color displacement corrective control	Remarks
1	Replacement of the cartridge	Approx. 3 min	Yes	Yes	Yes	Executed at the time of multiple initial rotations after power-on or door closing
2	Environmental change	Approx. 2.5 min	Yes	Yes	-	Temperature and humidity by the environment sensor
3	After a specified period of time is passed	Approx. 2.5 min	Yes	Yes	-	Executed 24 hours after the drum motor stops. The control is not however executed during sleep mode.
4	Recovery from sleep mode	Approx. 2.5 min	Yes	Yes	-	Executed 24 hours after the drum motor stops.
5	After a specified number of sheets is printed	Approx. 3 min	Yes *	Yes *	Yes (Every 1000 prints)	Executed after a job is completed.
6	Full correction (PASCAL)	Approx. 5 min	Yes	Yes	-	Executed by user's operation.
7	Quick correction	Approx. 2.5 min	Yes	Yes	-	Executed by user's operation.
8	Copy image correction	Approx. 4 min	Yes	Yes	-	Executed by user's operation.

*: Executed when 120 sheets are printed after the initial implementation
Executed when 500 sheets are printed after the 2nd implementation
Executed when 1000 sheets are printed after the 3rd implementation
Executed when 1000 sheets are printed thereafter

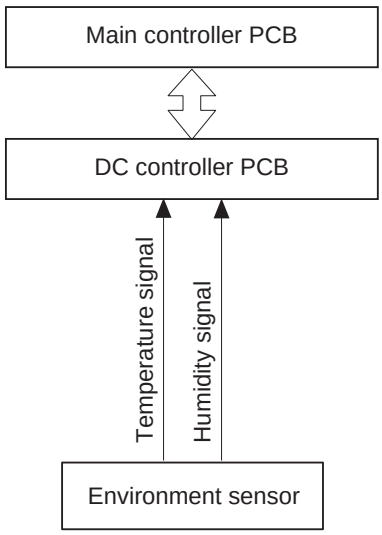
8.2.2 Environmental Change Corrective Control

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

This control corrects values of primary charging biases and developing biases to obtain an optimum image under the detected environmental condition.

Explanation of operation
The environment sensor sends detected temperature and humidity to the DC controller as a temperature signal and a humidity signal.
The DC controller detects the printer's installation environment based on these two signals.
The DC controller requests the main controller to send a command to execute environment related corrective control at the following timing.
- After power-on
- When the front cover is closed after the replacement of the toner cartridge
- When a specified period of time elapses after the execution of this control
- When a specified number of prints are completed after the execution of the previous job or after the replacement of the toner cartridge
- When a specified level of environmental change (temperature/humidity) has been made after the execution of this control
- When the DC controller received the execution command from the main controller

The DC controller executes the following measures to prevent an image failure after the execution of this control.
- Change the primary charging bias value.
- Change the developing bias.
- Request the main controller to execute image gradation collective control.



F-8-13

Error Codes:

E066 Environment sensor error alert
If the temperature detected by the environment sensor is out of the specified range, the host machine is stopped and an error code will be displayed.

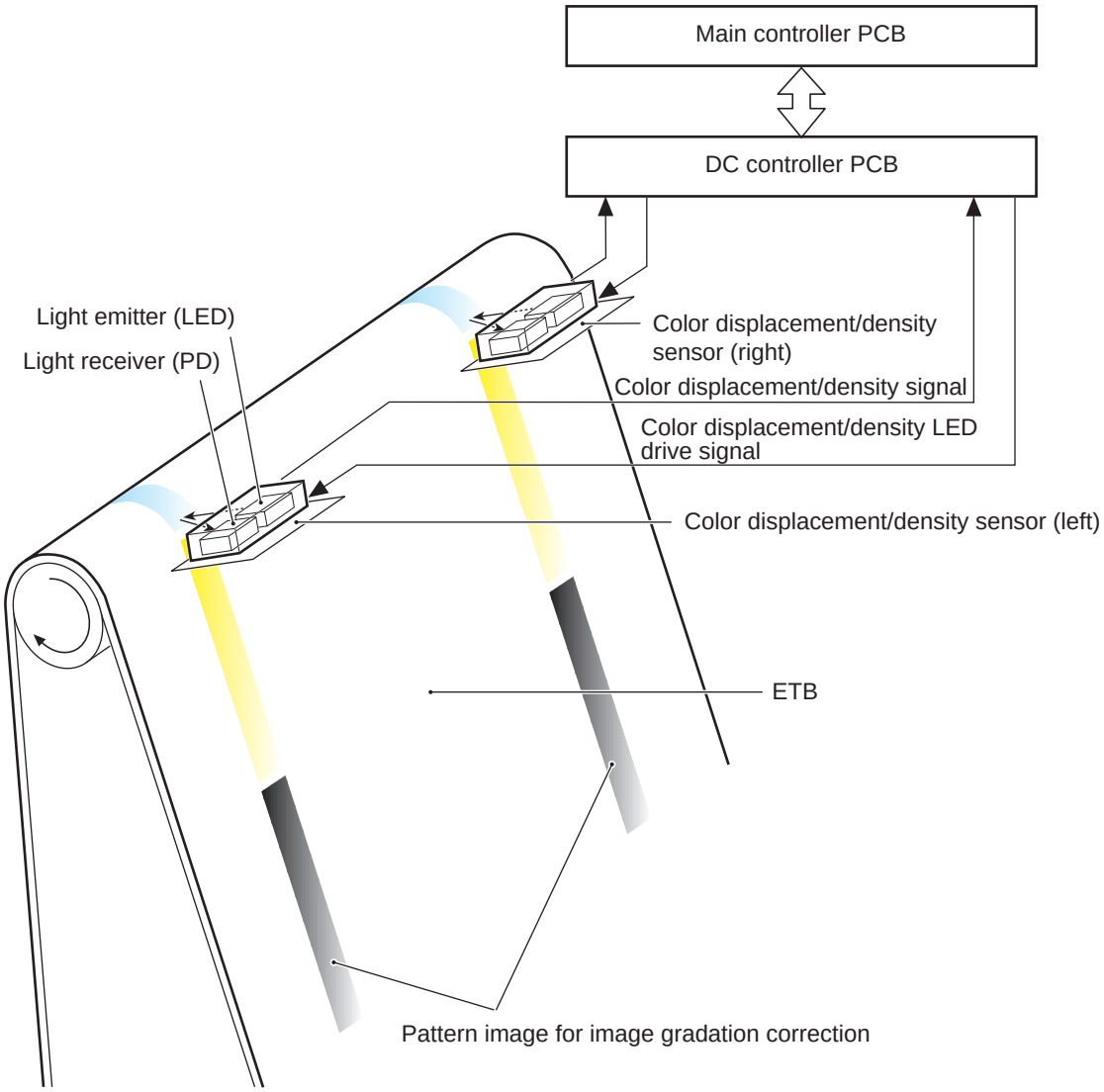
8.2.3 D-half Control

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

This control corrects the gradation data based on the halftone density in order to obtain ideal image gradation.
The DC controller executes this control following the command sent from the main controller.

Explanation of operation

1) When receiving a command of executing density measurement from the main controller, the DC controller forms a pattern image for image gradation correction for each color on the ETB.
   The pattern image for image gradation correction is formed with the specified density for each color (low at the left side and high at the right side), using the optimum developing bias determined by the environment related corrective control.
2) The DC controller sends a color displacement/density LED drive signal and flashes the light emitter (LED) of the color displacement/density sensor.
   The color displacement/density sensor is a reflection type sensor located on the upper side of the ETB. It consists of the light emitter (LED) and light receiver (PD).
3) The light emitted from the light emitter is reflected at the pattern image for image gradation correction and received at the light receiver of the color displacement/density sensor.
   The intensity of the reflected light varies depending on the toner density.
4) The color displacement/density sensor converts the received light into a voltage, and sends it to the DC controller as a density detection signal (analog value).
5) The DC controller converts the received density detection signal into density data, and sends it to the main controller.
6) The main controller performs gradation correction based on the received density data in order to obtain an ideal halftone image.



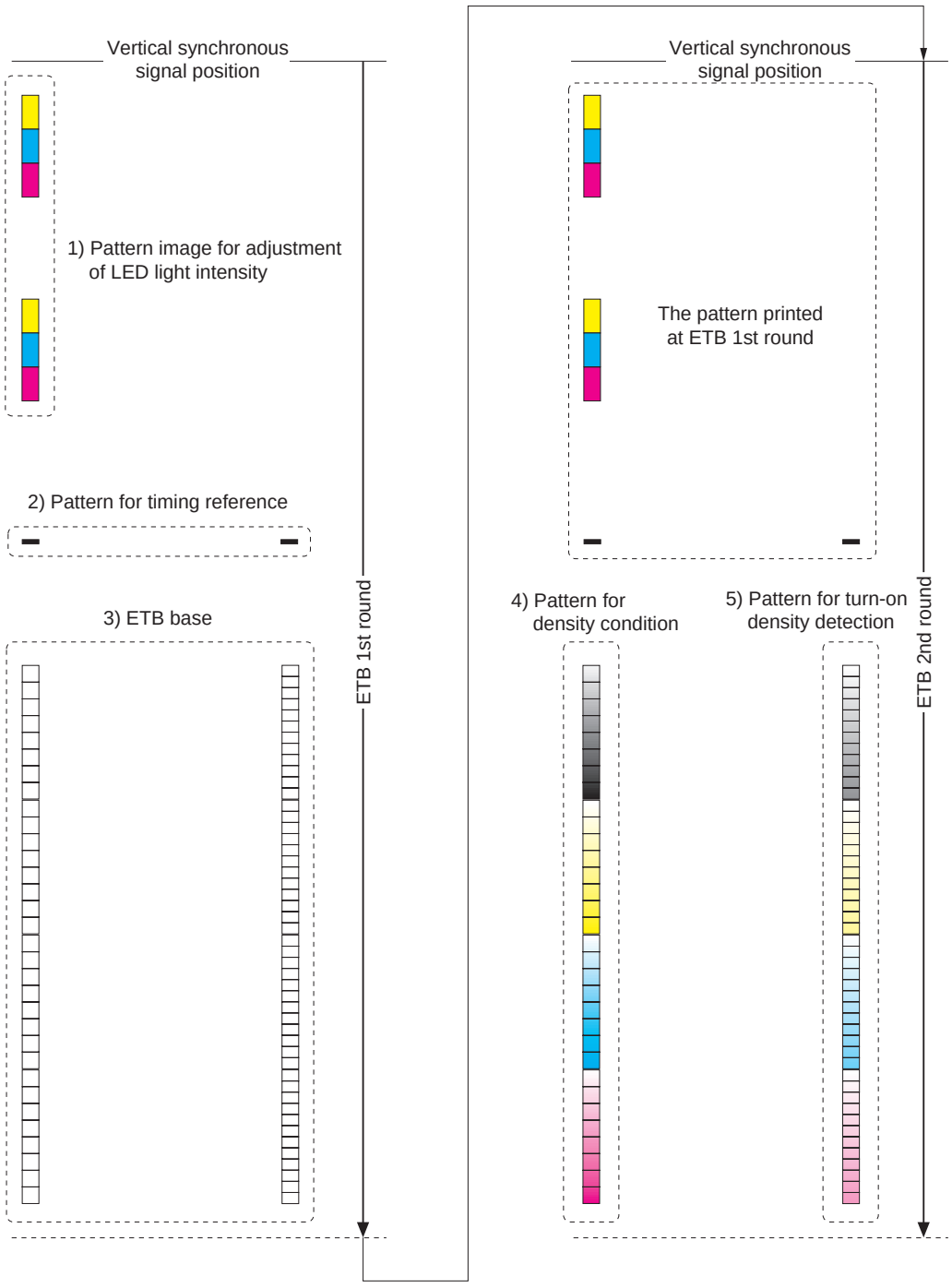
F-8-14

Error Codes:	
E020	Warning: color displacement/density sensor abnormality When light could not be received by the light receiver, the machine sets an initial value for the image density correction value and displays the error code on the control panel.

A pattern image for image gradation correction
Image gradation correction pattern is formed on the position away from ETB center to right and left in the following order.

ETB 1st round
1) Pattern image for adjustment of LED light intensity
Y, C, M pattern is printed on the left side only.
This pattern is to adjust the light intensity of the LED for the color displacement/image density sensor (left).
2) Pattern for timing reference
Bk pattern is printed on the same position at right and left.
This pattern is to measure the timing of step 3), 4) and 5).
3) ETB base
The machine measures the ETB base condition of the same position with the halftone patch that is measured at the 2nd round of ETB.
This is to measure the density of halftone patch accurately. The timing is determined with using the pattern printed at step 2).

ETB 2nd round
4) Pattern for density condition
Halftone patch of Bk, Y, C, M is printed on the left side only.
Measures the density condition of each color. The timing is determined with using the pattern printed at step 2).
5) Pattern for turn-on density detection
Halftone patch of Bk, Y, C, M is printed on the right side only.
This is to detect the turn-on density of each color (the printable minimum density). The timing is determined with using the pattern printed at step 2).



F-8-15

8.2.4 Color Displacement Corrective Control

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

This control corrects color displacement which occurs due to individual difference of the laser scanner unit and toner cartridge.
Since this machine uses a different toner cartridge for each color, a difference may occur in the position or the size of an image depending on the color.
The machine performs correction by calculating the degree of color displacement based on the position of the pattern image for color displacement correction formed on the ETB and controlling a video signal for each color.

The DC controller executes this control according to the command sent from the main controller.
Corrective control is performed for the following three points.

- Main scanning start position
- Main scanning magnification *
- Sub scanning start position

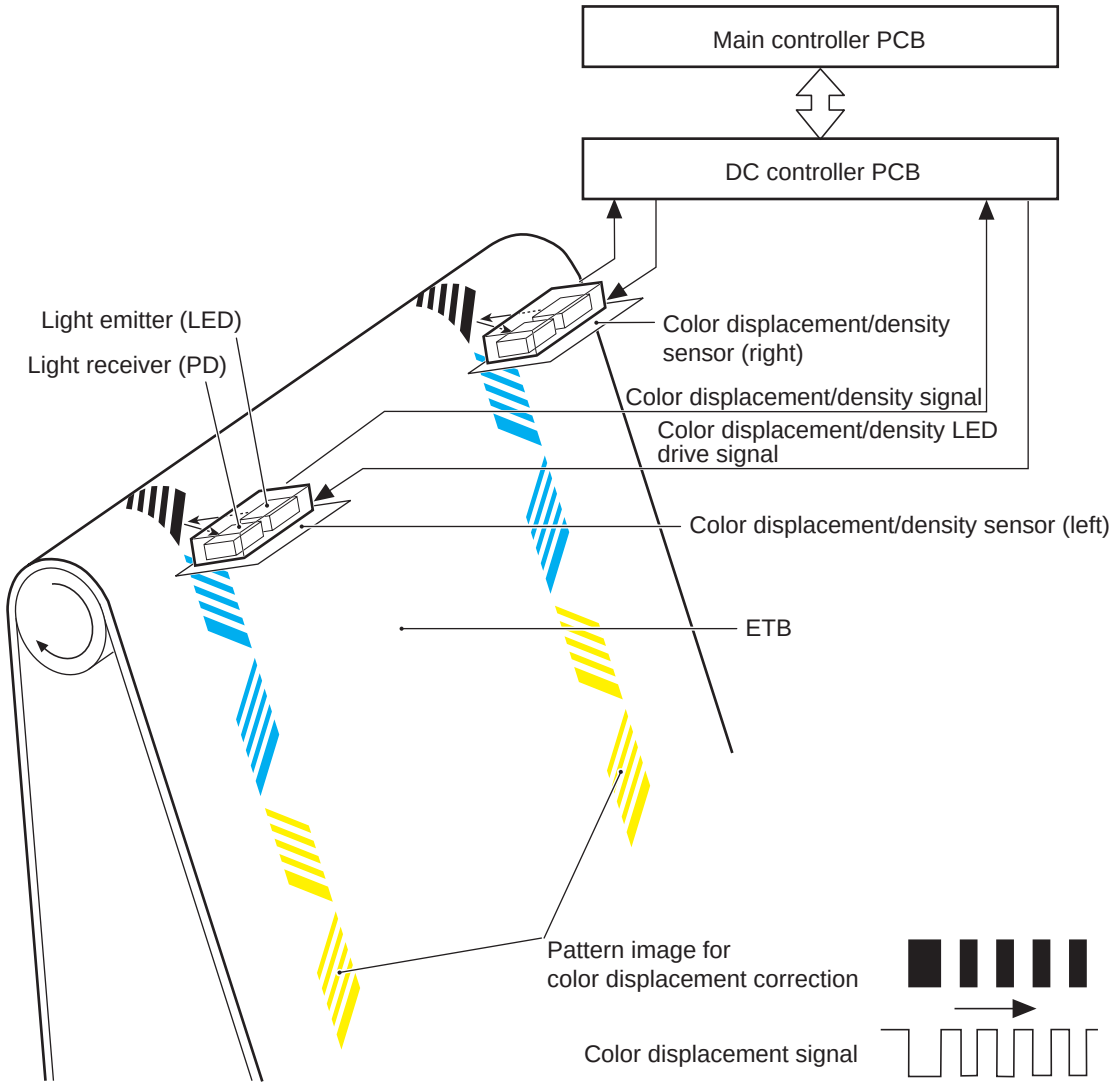
* This is an image size ratio in the main scanning direction. Since there is individual difference in the toner cartridge for each color, the position of the photosensitive drum and the laser optical path length vary depending on the color. Since the range of an image in the scanning direction also varies depending on the color, color displacement occurs at the edge of an image.

The color displacement corrective control is executed at the following timing.

- At power-on after the replacement of the toner cartridge
- When the front cover is closed after the replacement of the toner cartridge
- When a specified number of prints are completed
- When the execution command is received from the main controller

Explanation of operation

1) The DC controller forms a pair of pattern images for color displacement correction (one is on the left side and the other is on the right side) with four colors on the ETB.
2) The DC controller sends a color displacement/density LED drive signal so that the light emitter (LED) of the color displacement/density sensor emits light.
   The color displacement/density sensor is a reflection type sensor located on the upper side of the ETB. It consists of the light emitter (LED) and light receiver (PD).
3) The light emitted from the emitter is reflected at the ETB and received by the light receiver of the color displacement/density sensor.
   The intensity of this reflected light varies depending on whether toner exists or not.
4) The color displacement/density sensor converts the received light into a voltage, and sends it to the DC controller as a color displacement detection signal.
5) The DC controller determines the position of the pattern image based on the timing when the color displacement detection signal changes, and calculates the degree of color displacement for each color based on the position.
6) The degree of color displacement calculated for each color is sent to the main controller.
7) The main controller controls a video signal for each color based on the degree of color displacement of each color received, and makes adjustments of the main scanning start position, main scanning magnification, and sub scanning start position.



F-8-16

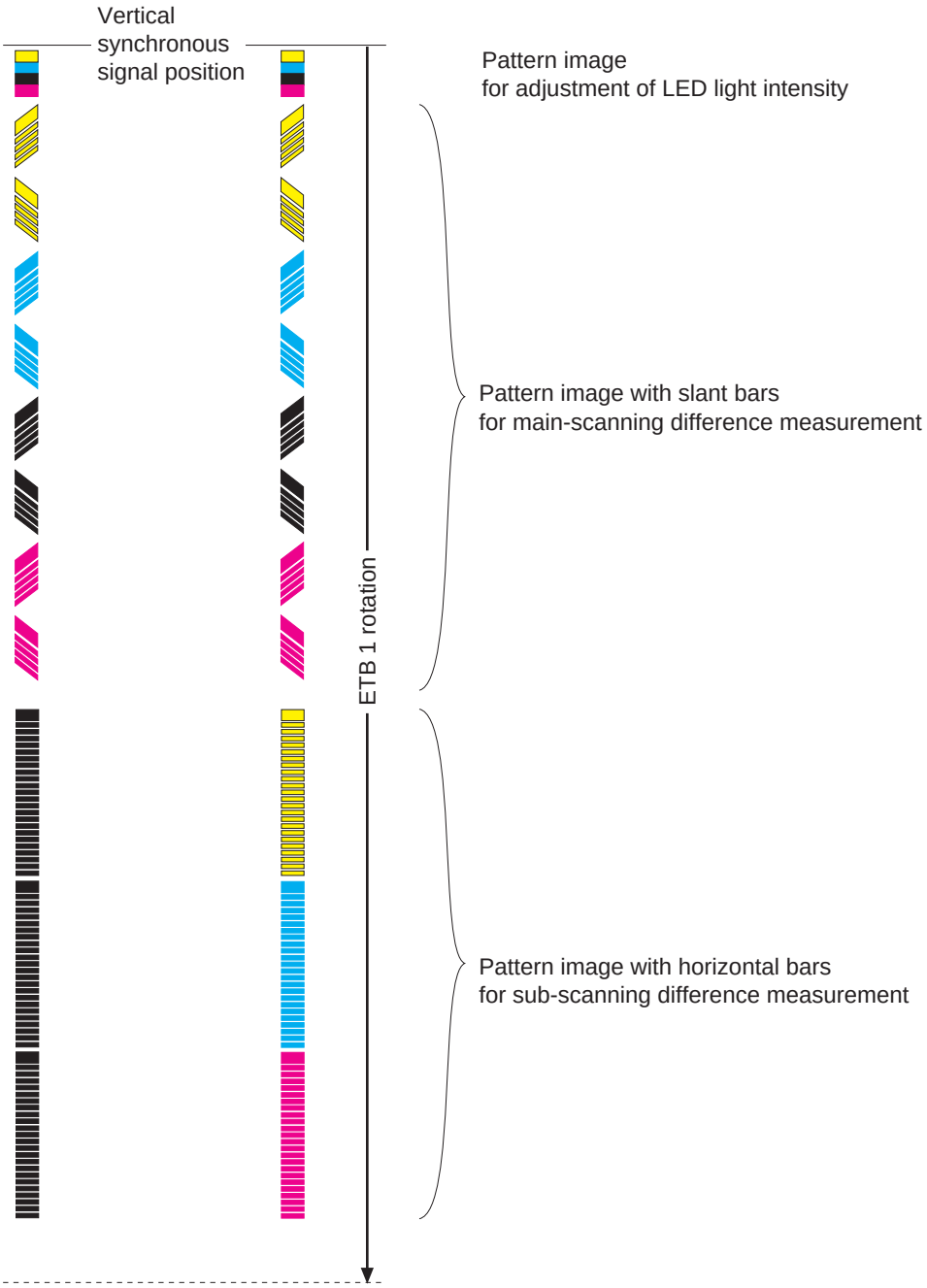
Error Codes:

E020	Warning: color displacement/density sensor abnormality When light could not be received by the light receiver, the machine sets an initial value for the color displacement corrective value, and displays the error code on the control panel.

Pattern image for color displacement correction

The pattern images are formed on both sides of the ETB certain distance away from the center in the following order.

1) Pattern image for adjustment of LED light intensity
   Printed in order of yellow (Y), cyan (C), black (Bk), and magenta (M).
2) Pattern image with slant bars for main-scanning difference measurement
   Printed in order of yellow (Y), cyan (C), black (Bk), and magenta (M).
3) Pattern image with horizontal bars for sub-scanning difference measurement
   Printed in black (Bk) only on the left side, and in order of yellow (Y), cyan (C), and magenta (M) on the right side.
   This is for the comparison of each color registration based on the black position.



F-8-17

8.2.5 Auto Gradation Correction Control

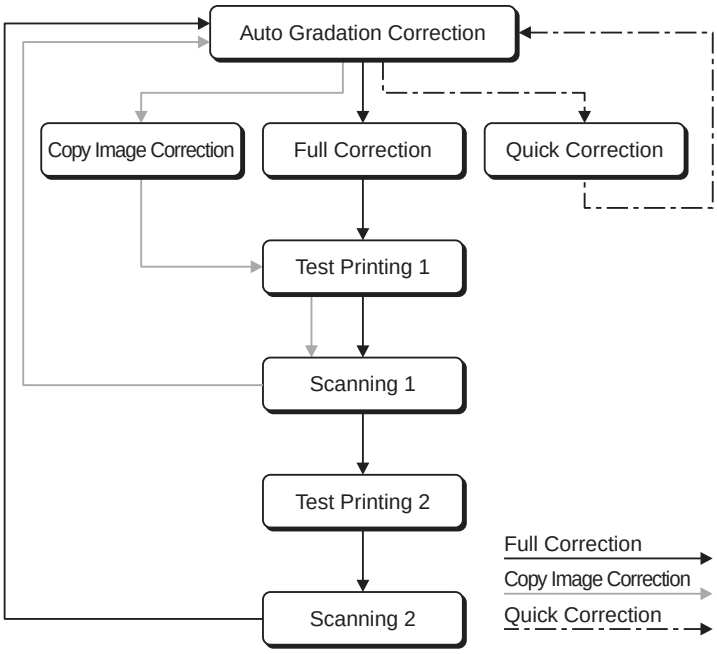
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Overview
Auto gradation correction control is to stabilize the gradation density features of image.
To execute, select [Adjustment/Cleaning > Auto Gradation Correction] in additional function mode.
It has the following 3 correction controls.

T-8-2

Item	Description	Number of test pattern sheet	Type of test pattern
Full Correction (PASCAL)	This correction outputs a test pattern and the reader scans its gradation density to adjust the gradation.	2	1st sheet: T-MIC 2nd sheet: high/low screen rulings
Quick Correction	This correction adjusts the gradation by means of D-half control instead of outputting a test pattern.	-	-
Copy Image Correction	This correction outputs a test pattern and the reader scans its gradation to mainly adjust the gradation of copy image.	1	T-MIC

Operation flow
Following flow shows the operation of correction control when any of full correction, quick correction or copy image correction is selected from the auto gradation correction.



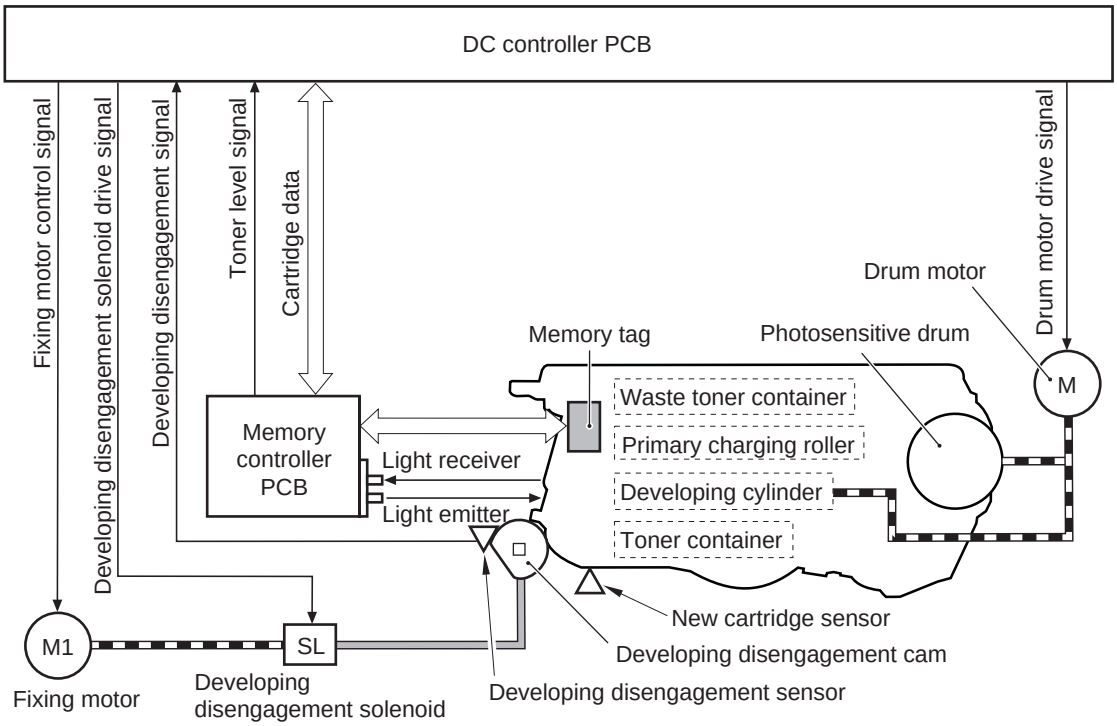
F-8-18

8.3 Toner Cartridge

8.3.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The toner cartridge enables to form a toner image on the photosensitive drum.
It consists of the photosensitive drum, primary charging roller, and developing cylinder, etc.
There are four kinds of print cartridges: Magenta, Cyan, Yellow, and Black, having nearly identical structure.



F-8-19

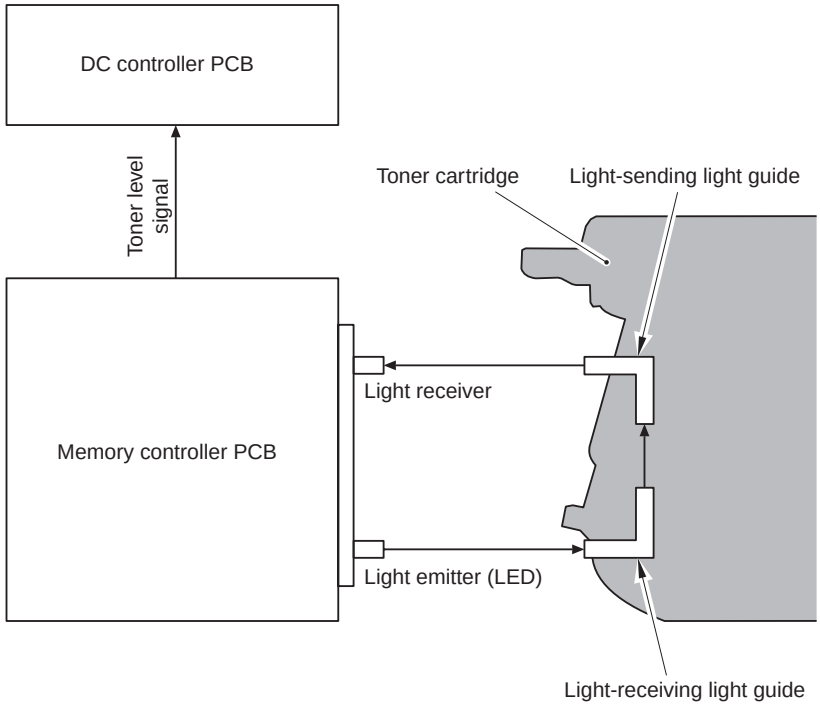
The toner cartridge executes the following four controls.
- Memory tag control
- Toner cartridge detection
- New toner cartridge detection
- Developing cylinder engagement/disengagement control

8.3.2 Toner Level Detection

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine uses a transparent toner level detection method.
With this method, light goes through the toner cartridge while the toner is stirred driven by the drum motor.
The DC controller detects the toner level by monitoring how long it takes for the light to go through the cartridge.

Explanation of operation
The DC controller illuminates the LED on the memory controller PCB.
The light emitted from the LED enters into the toner cartridge via the light-receiving light guide.
Since the stirred toner blocks the light, how long it takes for the light to go through the cartridge differs depending on the toner volume.
The light that went through the toner cartridge goes out from the light-sending light guide and is received at the memory controller PCB.
The toner level is detected based on the length of the time it took for the main controller to receive the light. The higher the toner level is, the shorter time is taken to receive light. On the other hand, the lower the toner level is, the longer time is taken.
When the light-receiving time becomes longer than the specified value, the DC controller judges that the toner level is low and displays "Toner level is low" in the control panel.

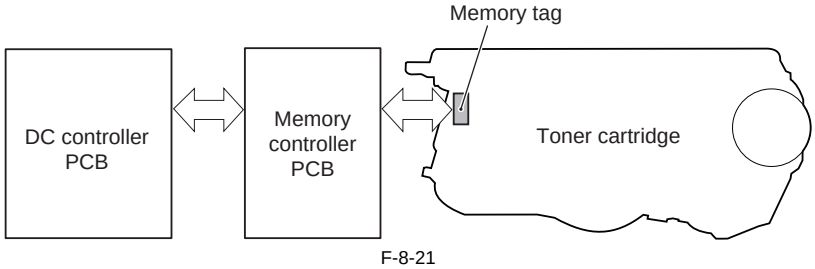


F-8-20

8.3.3 Memory Tag Control

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The DC controller detects the use condition of the toner cartridge by reading/writing data saved in the memory tag.
When the machine is placed in the following condition, the DC controller determines that it is a communication error of the memory tag and notifies the main controller of "Warning: cartridge memory abnormality".
- Access abnormality: When reading/writing failed
- Data abnormality: When a fault was found in the data which was read/written



F-8-21

8.3.4 Toner Cartridge Detection

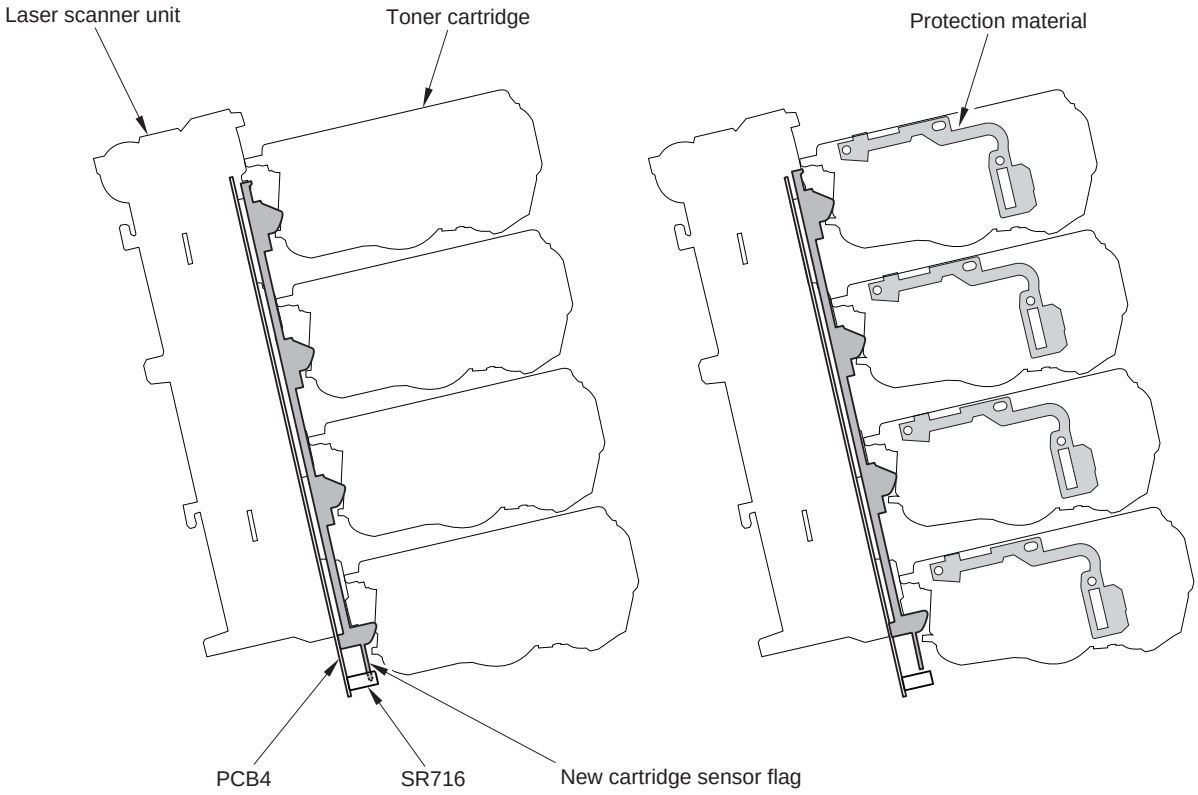
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The time required until the rotating drum motor stops varies depending on the presence/absence of the toner cartridge. When the toner cartridge is present, the load applied to the drum motor increases, which shortens the stop time.
The DC controller detects the presence/absence of the toner cartridge based on the stop time of the drum motors (M6 to 9) after the initial drive of the drum motors when the power is turned ON or the front cover is closed.
When it is determined that the toner cartridge is absent, the DC controller stops the machine's operation and displays "No toner cartridge" on the control panel.

8.3.5 New Toner Cartridge Detection

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

It is detected whether the protection material has been removed from the new cartridge.
At the time of shipment, a toner cartridge with a protection material (sealing tape) has been inserted into the machine. This protection material needs to be removed when the machine is installed.
When the power is turned ON without removing the protection material, the new cartridge sensor flag is pressed by the protection material, so a new cartridge sensor (SR716) detects the presence of the protection material. In this condition, the machine determines that the protection material is not removed from the toner cartridge, stops the operation, and then displays a message prompting an operator to remove the protection material.



a. In the case of the toner cartridge being used b. In the case of the new toner cartridge

F-8-22

8.3.6 Developing Cylinder Engagement/disengagement Control

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

In the machine, the developing cylinder is engaged with or disengaged from the photosensitive drum as necessary for the following purposes.
- To reduce the color photosensitive drum consumption at the time of monochrome printing
- To prevent lines of the photosensitive drum due to engagement with the developing cylinder
- To prevent toner transfer when printing is not performed

MEMO:
The machine uses a contact development method, in which the developing cylinder is engaged with the photosensitive drum.

- At color printing, developing cylinders of all colors are engaged with the photosensitive drum, but, at monochrome printing, only the black-color developing cylinder is engaged with it. By disengaging developing cylinders of colors other than black from the drum, the machine reduces the color photosensitive drum consumption at monochrome printing.
- When the machine stops for a long period of time, lines occur in the area where the developing cylinder and the photosensitive drum come into contact. To prevent this symptom, the developing cylinder is disengaged from the photosensitive drum.
- When printing is not performed, the toner on the developing cylinder adheres to the photosensitive drum. To prevent this symptom, the developing cylinder is disengaged from the photosensitive drum.
- This control works with the transfer roller engagement/disengagement operation. For details, refer to "Transfer Roller Engagement/disengagement Control".

The developing cylinder engagement/disengagement control is executed at the following timing.
- Multiple initial rotations at power-on
- Image stabilization control
- Printing operation

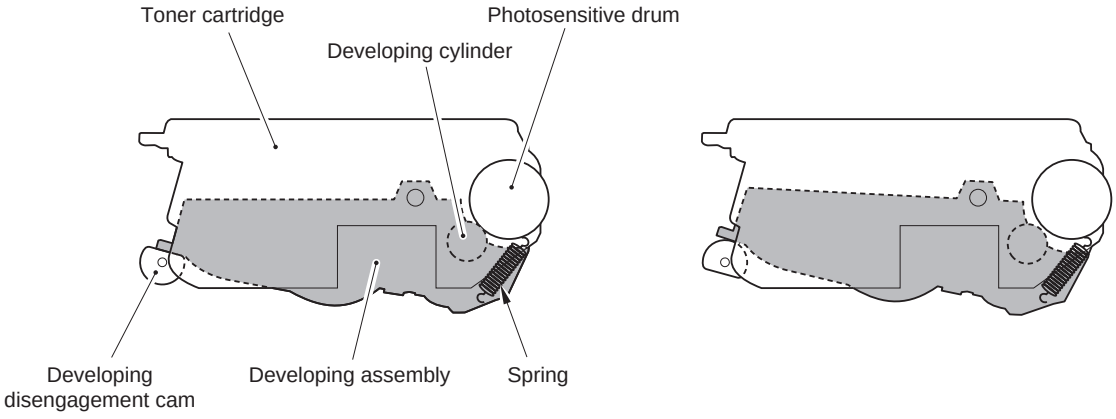
The status of engagement/disengagement during printing operation differs depending on the printing mode (monochrome or color mode).

T-8-3

Color mode		Developing cylinder	Drum motor drive
Color printing		All color cylinders are engaged.	All color motors are driven.
Monochrome printing	Plain paper, Transparency	Only the black color cylinder is engaged.	Only the black color motor is driven.
	Others*		All color motors are driven.
Power-off/standby		All color cylinders are disengaged.	Stopped

*: Thick paper, envelope, rough paper, small-size paper, thin paper (H/H environment), thin paper (when thin paper/rough paper is specified in the special control mode)

Explanation of operation
The toner cartridge consists of the upper part where the photosensitive drum is attached and the lower part where the developing cylinder is attached (developing assembly).
When the developing disengagement solenoid (Bk: SL5015, YMC: SL5014) is turned OFF, the developing disengagement cam moves up the rear side of the developing assembly, so the developing cylinder is disengaged from the photosensitive drum with the principle of leverage.
When the DC controller turns ON the developing disengagement solenoid, the drive of the fixing motor (M1) is sent to the developing disengagement cam, causing the cam to rotate. When the radius of the developing disengagement cam becomes shorter than the distance between the cam and the developing assembly, the developing cylinder is engaged with the photosensitive drum by the power of a spring.
The engagement/disengagement condition is detected by the developing disengagement sensor (Bk: SR711, YMC: SR712) based on the direction of the developing disengagement cam.



F-8-23

Error Codes:

E015 Developing disengagement abnormality
When the machine is placed in the following condition, it stops operation and displays the error code on the control panel.
- The direction of the developing disengagement cam does not change from the home position after a specified period of time when the developing cylinder is disengaged from the drum.
- The direction of the developing disengagement cam does not return to the home position after a specified period of time when the developing cylinder is engaged with the drum.

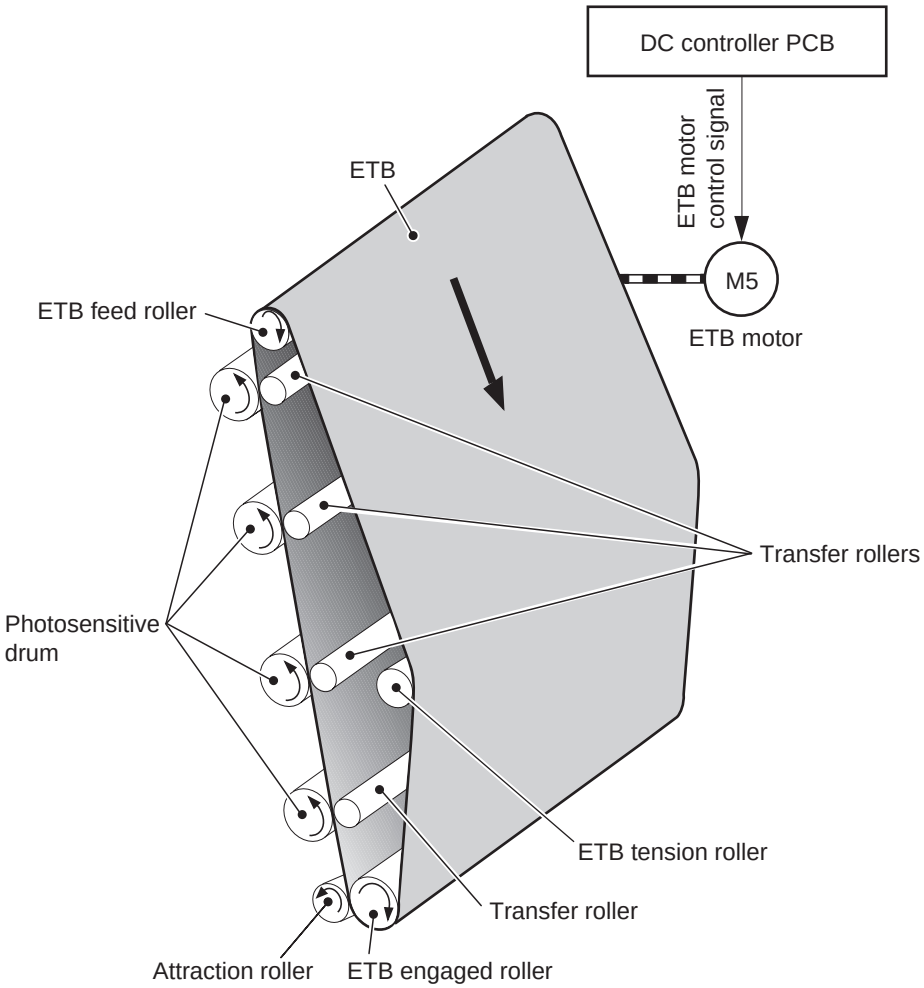
8.4 Transfer Unit

8.4.1 ETB Unit

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The ETB unit transfers toner into paper while feeding the paper.
The ETB unit consists of the ETB, ETB tension roller, ETB feed roller, ETB slave roller, attraction roller, and transfer roller.
The ETB motor (M5) rotates the ETB feed roller, and this drive rotates the ETB. All of other rollers are driven by the ETB.
At the time of printing, the fed paper is attracted to the ETB by the attraction roller, and transported according to the rotation of the ETB. During transportation, toner is transferred by the photosensitive drum and transfer roller of each color. After the toner is transferred, the paper is separated from the ETB by the ETB feed roller.
Especially at the time of color printing, high accuracy is requested for paper feeding by the ETB because one image is formed with four color toners overlapped.
The ETB is also used for image stabilization control. When image gradation corrective control or color displacement corrective control is executed, the pattern image for color displacement or image gradation correction is written on the ETB.

The ETB unit executes the following three major controls.
- Automatic bias control
- ETB cleaning
- Transfer roller engagement/disengagement control



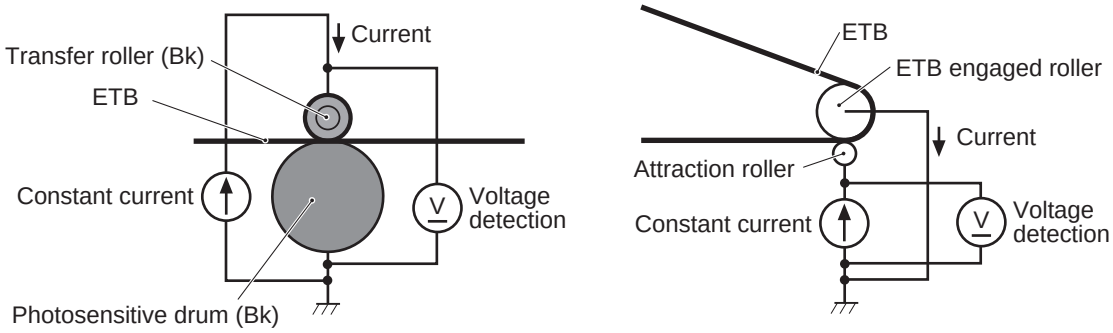
F-8-24

8.4.2 Automatic Bias Control

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Depending on the individual difference or deterioration condition of the transfer roller, attraction roller, and ETB, differences and changes occur in the resistance value of each unit. In this condition, a transfer failure may occur when an expected level of bias is not applied to each roller.
This control is executed to apply the optimum level of bias to each roller based on the measured voltage of each roller.

The DC controller sends a constant current to the transfer roller (Bk) and attraction roller when starting print operation and measures the voltage at that point. Based on the measured voltage, it extracts the optimum transfer and attraction biases.
In the subsequent print operation, the optimum transfer and attraction biases are applied to stabilize the image quality.



a. Transfer roller voltage detection

b. Attraction roller voltage detection

F-8-25

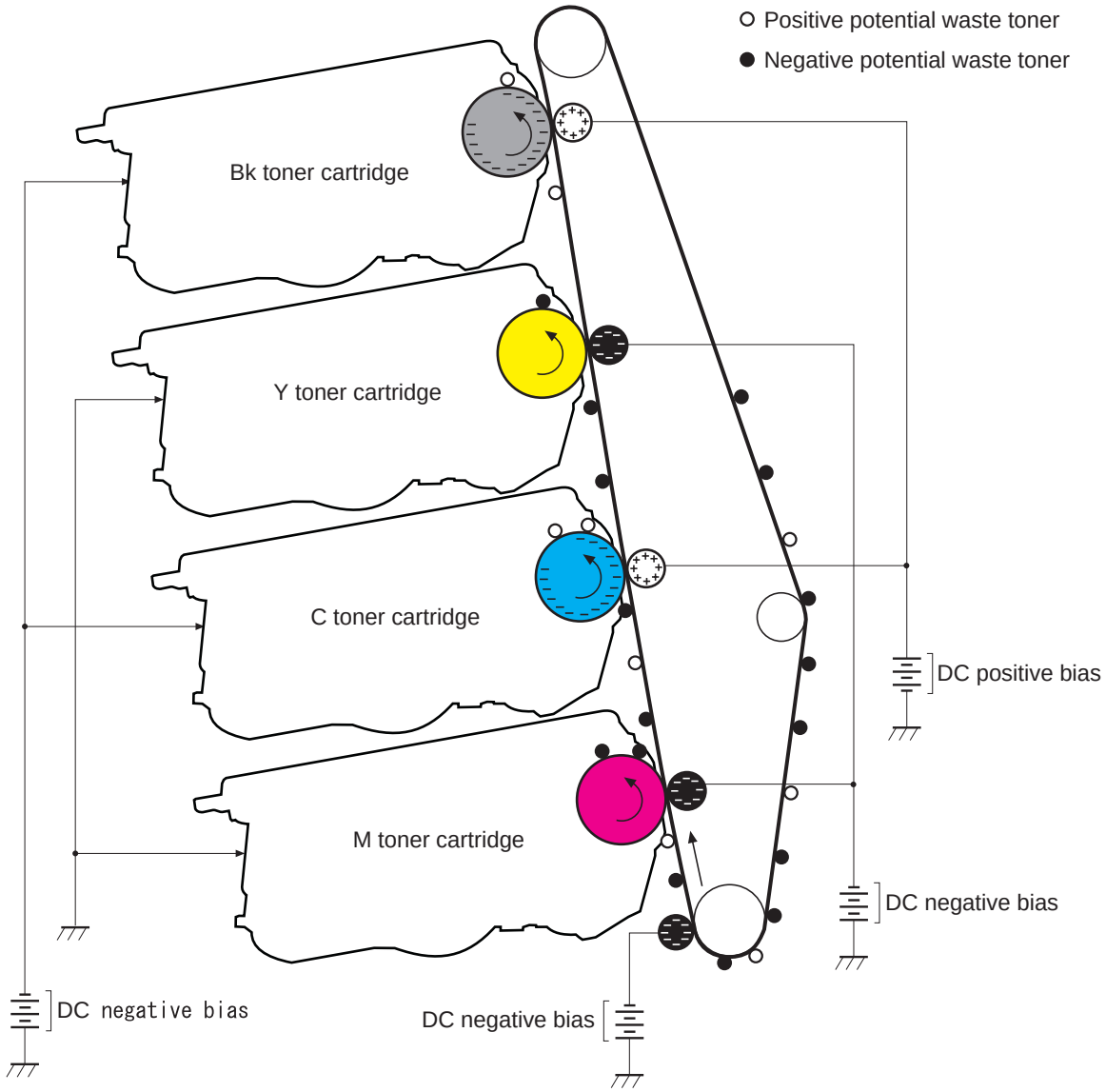
8.4.3 ETB Cleaning

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The ETB is used not only to transfer the toner on the photosensitive drum to the paper but also to write a pattern image for correction for image stabilization control. If the toner which is not transferred to the paper remains on the ETB, it causes stain on the back of paper.
In this control, the ETB surface is cleaned by placing the residual toner on the ETB back to the photosensitive drum electrostatically.

The ETB cleaning is executed by the DC controller at the following timing.
- At power-on
- Before and after the execution of color displacement corrective control
- Before and after the execution of image gradation corrective control
- When the front cover is closed
- After printing is performed when the universal-size paper is specified

Negative charged toner and positive charged toner remain on the ETB.
When ETB cleaning starts, the DC controller sets the potential of the photosensitive drums for magenta (M) and yellow (Y) to 0, using the bias of the primary charging roller. The photosensitive drums for cyan (C) and black (Bk) are changed negative.
For the transfer roller for each color, a positive or negative DC bias is applied as shown in the figure below.
Since potential difference occurs between each photosensitive drum and ETB, the residual toner is reverse-transferred to the photosensitive drum. The negative charged toner is adhered to the photosensitive drums for magenta (M) and yellow (Y), and the positive charged toner is adhered to the photosensitive drums for cyan (C) and black (Bk).
The toner adhered to the photosensitive drum is scraped by the cleaner blade and collected into the waste toner container.



F-8-26

8.4.4 Transfer Roller Engagement/disengagement Control

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Overview
In the machine, the transfer roller is engaged with or disengaged from the photosensitive drum via the ETB to reduce the color photosensitive drum consumption at monochrome printing.
The transfer roller engagement/disengagement control is executed at the following timing.
- Multiple initial rotations at power-on
- Multiple initial rotations at door closing
- Image stabilization control
- Printing operation

The status of engagement/disengagement during printing operation differs depending on the printing mode (monochrome or color mode).
This control works with the developing cylinder engagement/disengagement operation.

T-8-4

Color mode		Transfer roller	Developing cylinder
Color printing		All color cylinders are engaged.	All color cylinders are engaged.
Monochrome printing	Plain paper, Transparency	Only the black color cylinder is engaged.	Only the black color cylinder is engaged.
	Others*	All color cylinders are engaged.	
Power-off/standby		All color cylinders are disengaged.	All color cylinders are disengaged.

*: Thick paper, envelope, rough paper, small-size paper, thin paper (H/H environment), thin paper (when thin paper/rough paper is specified in the special control mode)

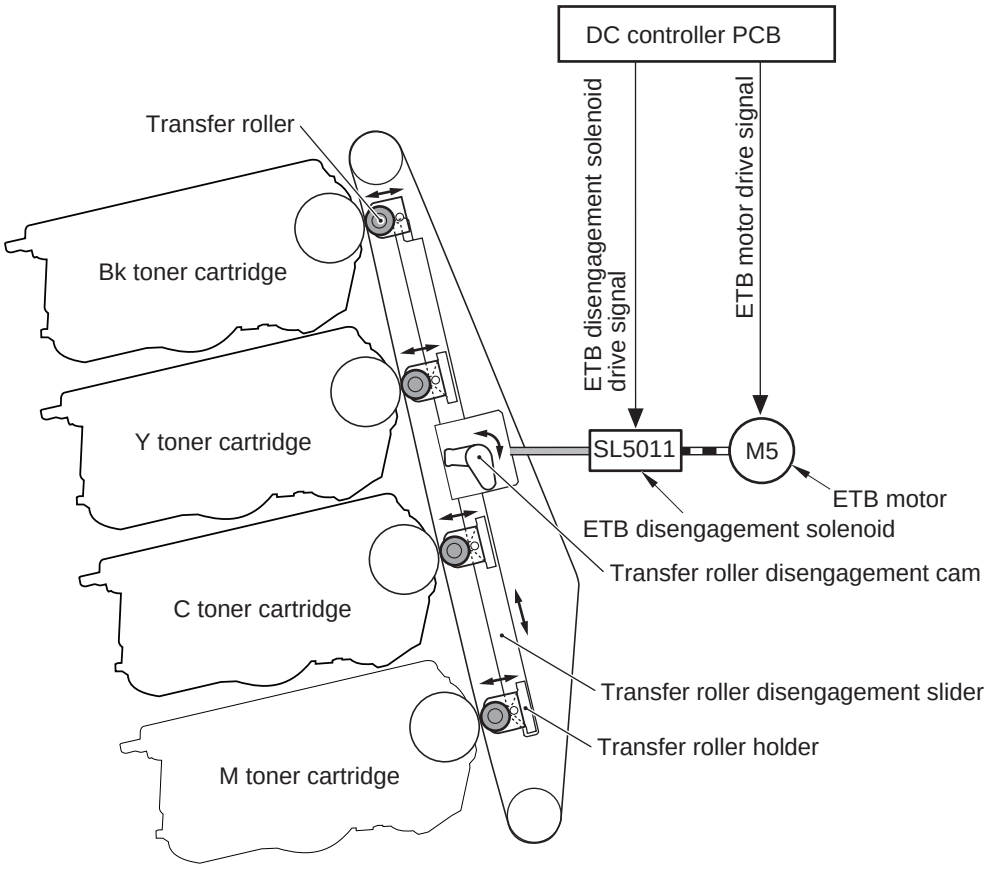
MEMO:
- The photosensitive drum consumption is affected by the drum rotation time.
  At monochrome printing of plain paper or transparency, the photosensitive drums of Y, M, and C are disengaged from the ETB so that they do not rotate. In this condition, the sheet is attracted to the ETB by an attraction bias and fed to the black color photosensitive drum.
  However, when feeding thick paper and envelopes, the photosensitive drums of Y, M, and C are engaged with the ETB because the absorption power by the attraction bias is weak for such media.
- This control is executed every time the printing mode is switched. When mixed printing of color and monochrome is performed, the print speed is reduced due to engagement/disengagement of the transfer roller.

Service mode:
To prevent reduction of the print speed at mixed printing of color and monochrome, set the transfer roller to color mode (in which all color transfer rollers are engaged with the photosensitive drum).
COPIER> FUNCTION> SPLMAN> SPL53649

However, when this setting is made, the color photosensitive drum is consumed even at the time of monochrome printing.

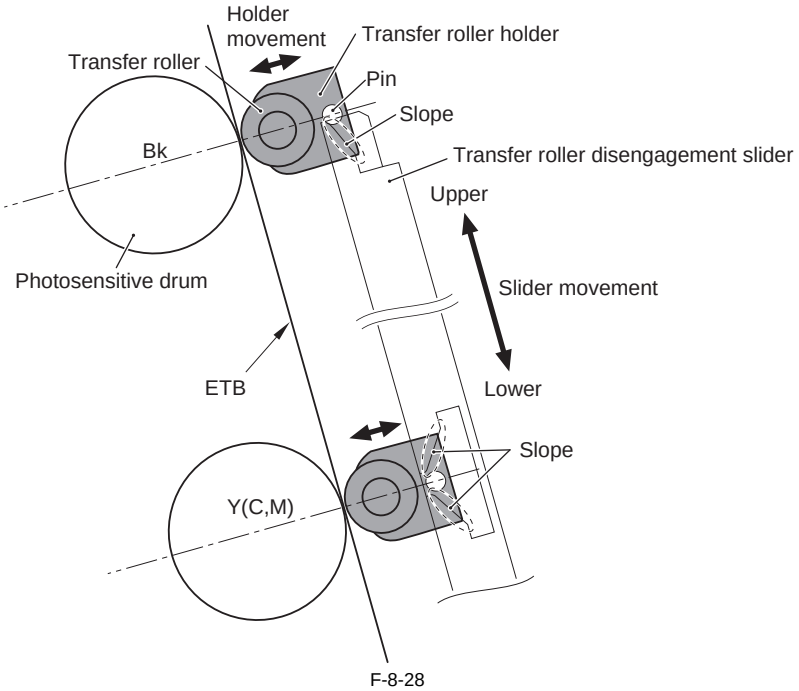
Explanation of operation

When the DC controller turns ON the ETB disengagement solenoid (SL5011), the drive of the ETB motor (M5) is sent to the transfer roller disengagement slider via the transfer roller disengagement cam. The transfer roller is engaged with/disengaged from the ETB by working with the transfer roller disengagement slider.



F-8-27

The transfer roller for each color is attached to the transfer roller holder.
When the pin on the transfer roller holder is hooked to the slope of the transfer roller disengagement slider, the transfer roller holder follows the operation of the transfer roller disengagement slider.
When the transfer roller disengagement slider moves up and down, the pin moves along the slope, and the transfer roller is engaged with or disengaged from the transfer roller.

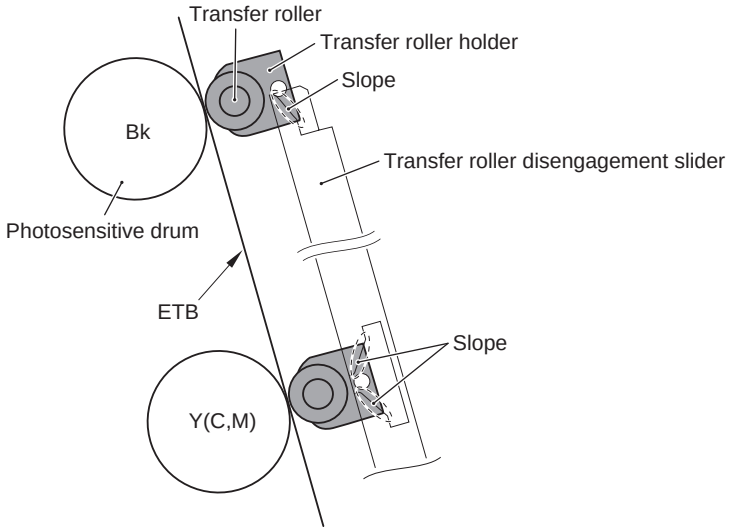


F-8-28

(a) Standard position (All colors' transfer rollers are engaged)

When the transfer roller disengagement slider is placed at the standard position, all the transfer roller holders are placed at the lowest position of the slope, so the all colors' transfer rollers are engaged with the ETB.

At the time of color printing or monochrome printing of the specified thick paper, all the transfer rollers are engaged with the ETB, so the transfer roller disengagement slider is considered to be at the standard position.



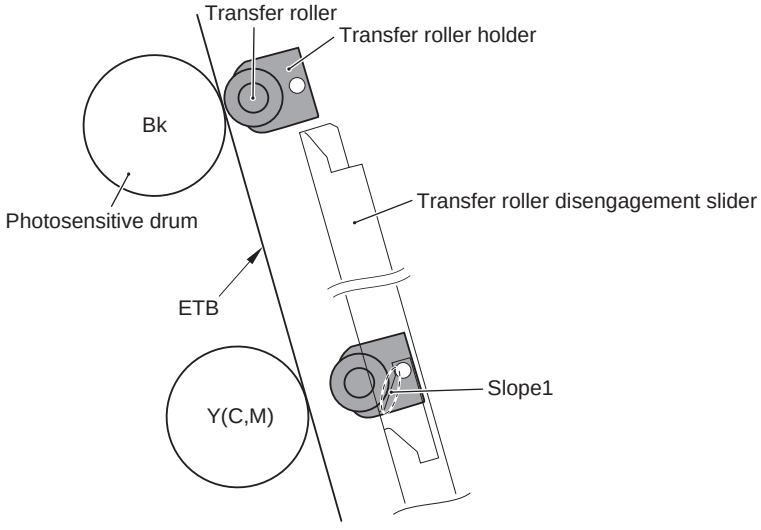
F-8-29

(b) Downward position (Only black transfer roller is engaged)

When the transfer roller disengagement slider is placed at the downward position, the yellow (Y) transfer roller holder moves to the highest position along the slope 1, so the transfer roller is disengaged from the ETB. The same applies to cyan (C) and magenta (M).

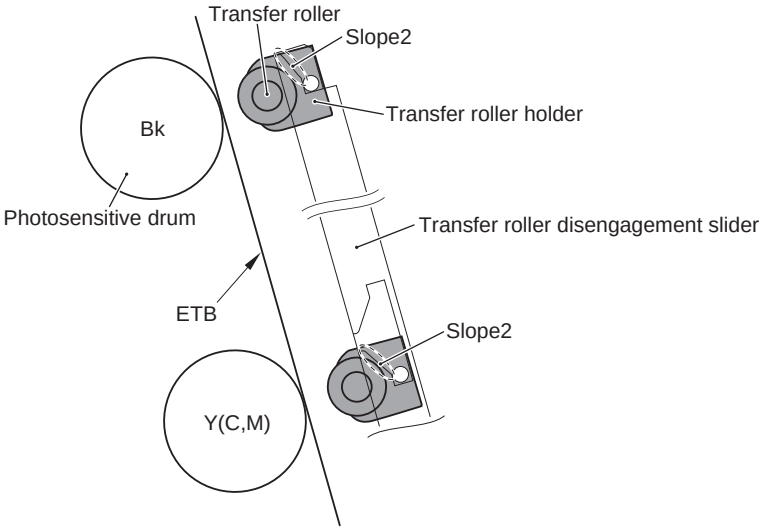
The black (Bk) transfer holder stays at the lowest position because the transfer roller disengagement slider has no slope. As a result, the transfer roller is engaged with the ETB.

At monochrome printing, only the black (Bk) transfer roller is engaged with the ETB, so the transfer roller disengagement slider is placed at the downward position.



F-8-30

(c) Upward position (All colors' transfer rollers are disengaged)
When the transfer roller disengagement slider is placed at the upward position, the transfer roller holder moves to the highest position along the slope 2, so the all colors' transfer rollers are disengaged from the ETB.



F-8-31

Detection of the condition
The engagement/disengagement condition of the transfer roller is detected when the power is turned ON or when the front cover is closed.
The DC controller measures the voltage of the transfer rollers for magenta (M) and black (Bk), and detects the engagement/disengagement condition of the transfer rollers based on the measurement result.
If the change of engagement/disengagement could not be confirmed when the engagement/disengagement condition of the transfer rollers was detected again after the transfer roller disengagement slider was moved, the DC controller measures the voltage of the transfer rollers again (retry control).

Error Codes:	
E078	Transfer disengagement mechanism abnormality When the engagement/disengagement condition could not be detected correctly after retry control was executed, the machine stops operation and displays the error code on the control panel.

8.5 Parts Replacement Procedure

8.5.1 Drum Motor

8.5.1.1 Before Removing the Drum Motor

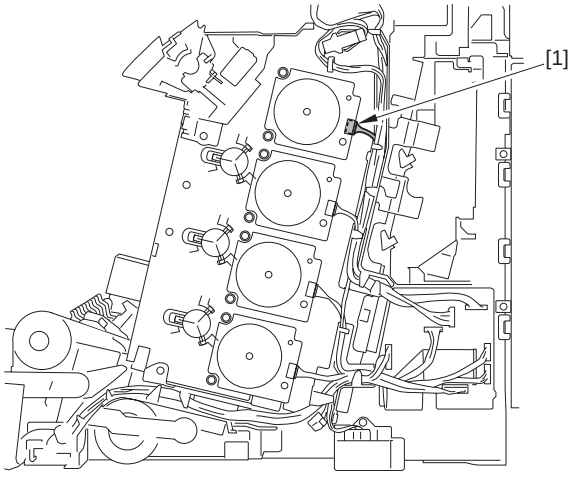
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit. (page 8-30) Reference[Removing the ETB Unit]
2) Remove the rear cover unit. (page 11-12) Reference[Removing the Rear Cover Unit]
3) Remove the right cover. (page 11-12) Reference[Removing the Right Cover]

8.5.1.2 Removing the Drum Motor

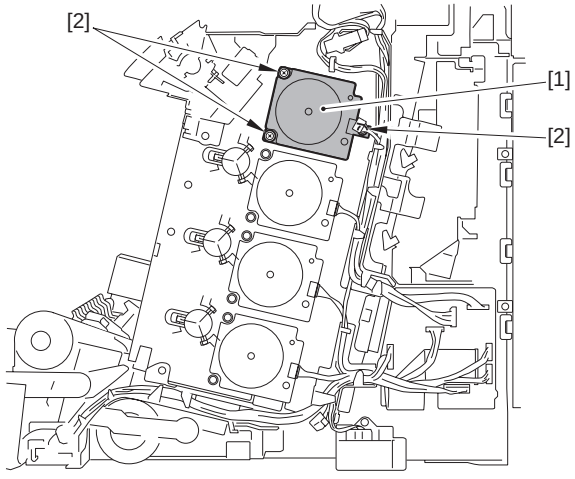
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Disconnect the connector [1].



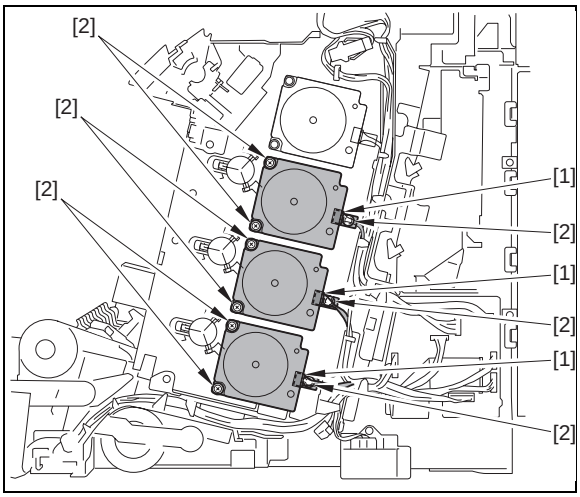
F-8-32

2) Remove the durm motor (Bk) [1].
- 3 screws [2]



F-8-33

MEMO:
When removing the drum motors of other colors, remove the following parts in the same way as the drum motor (Bk).
- 3 connectors [1]
- 9 screws [2]



8.5.2 Main Drive Unit

8.5.2.1 Before Removing the Main Drive Unit

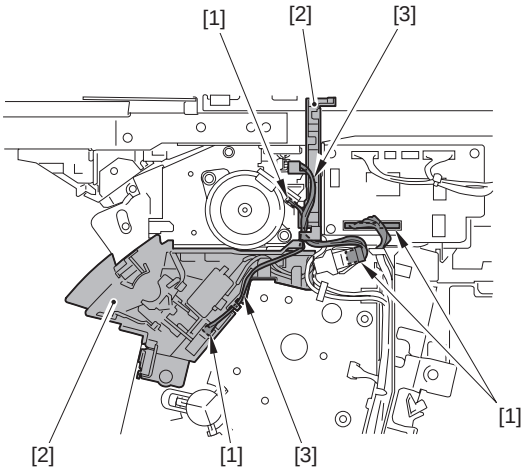
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit. (page 8-30) Reference[Removing the ETB Unit]
2) Remove the toner cartridge.
3) Remove the rear cover unit. (page 11-12) Reference[Removing the Rear Cover Unit]
4) Remove the right cover. (page 11-12) Reference[Removing the Right Cover]
5) Remove the drum motor. (page 8-25) Reference[Removing the Drum Motor]

8.5.2.2 Removing the Main Drive Unit

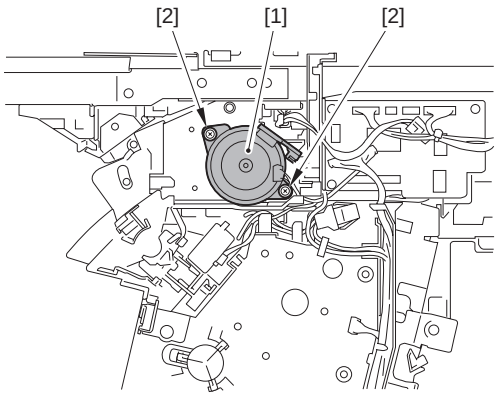
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Disconnect the 4 connectors [1] and free the harness [3] from the 2 harness guides [2].



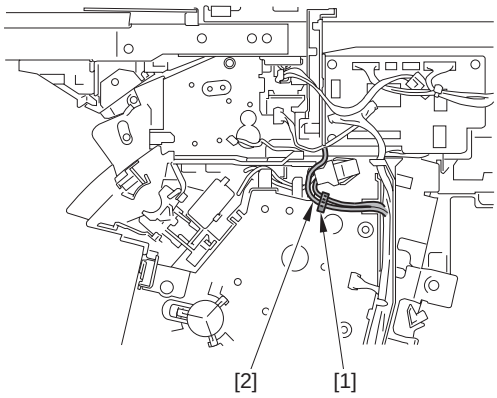
F-8-34

2) Remove the duplex feed motor [1].
- 2 screws [2]



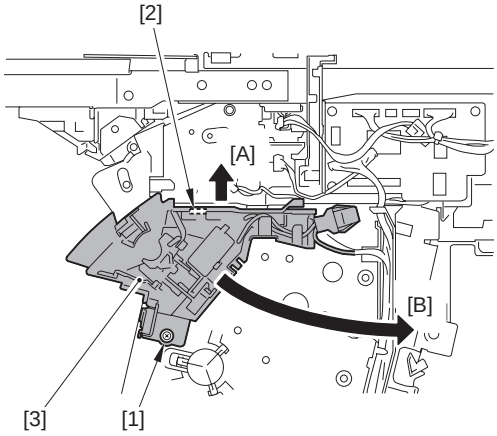
F-8-35

3) Free the harness [2] from the wire saddle [1].



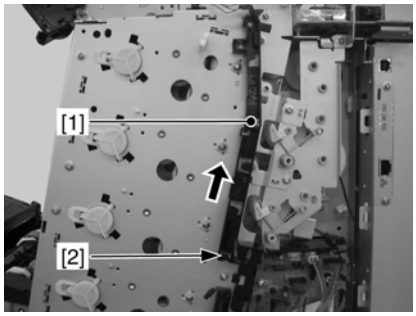
F-8-36

4) Remove the screw [1], remove the hook [2] in the direction of the arrow [A], and remove the interlock switch unit [3] in the direction of the arrow [B].



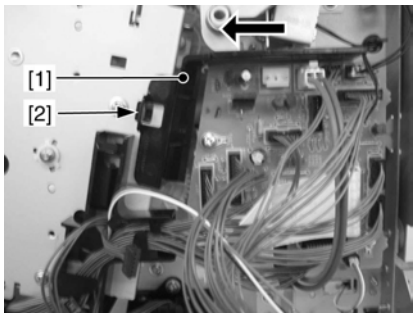
F-8-37

5) Slide the cable guide [1] to remove.
- 1 claw [2]



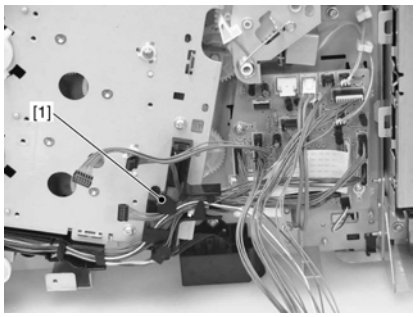
F-8-38

6) Slide the cable guide [1] to remove.
- 1 claw [2]



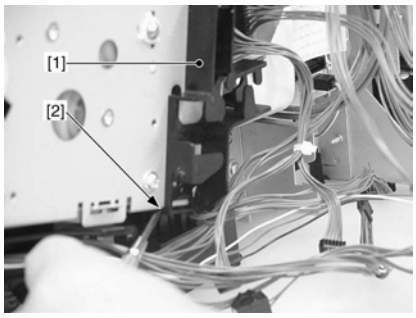
F-8-39

7) Free the cable from the cable guide [1].



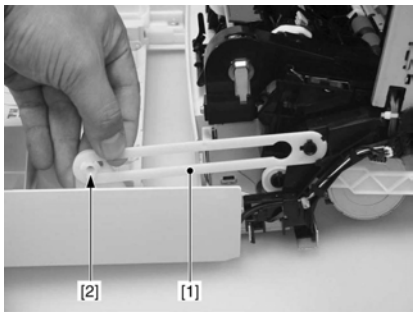
F-8-40

8) Remove the cable guide [1].
- 1 claw [2]



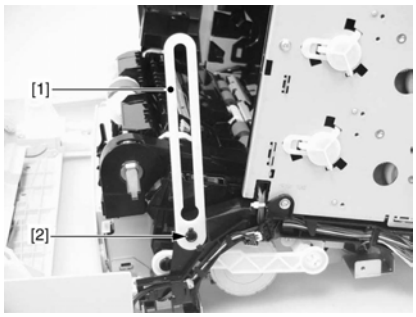
F-8-41

9) Remove the link [1] from the shaft [2].



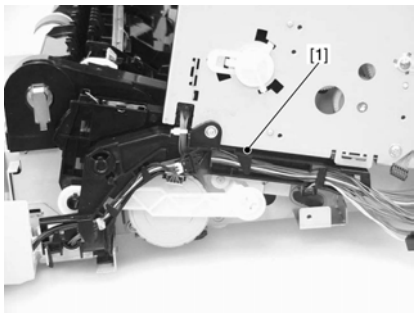
F-8-42

10) Fit the link [1] with the cutoff of the shaft [2] to remove the link.



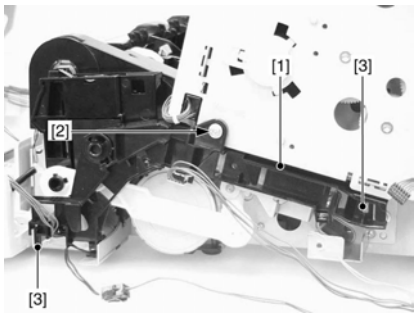
F-8-43

11) Free the cable from the cable guide [1].



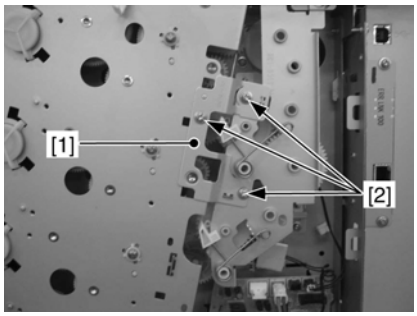
F-8-44

12) Remove the cable guide [1].
- 1 screw [2]
- 2 claws [3]



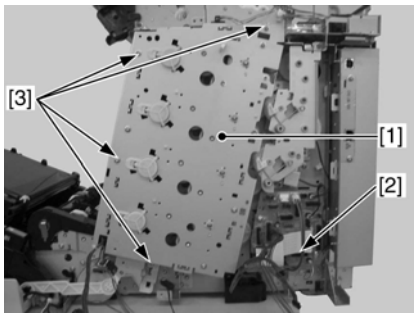
F-8-45

13) Remove the plate [1].
- 3 screws [2]



F-8-46

14) Remove the main drive unit [1].
- 1 connector [2]
- 4 screws [3]



F-8-47

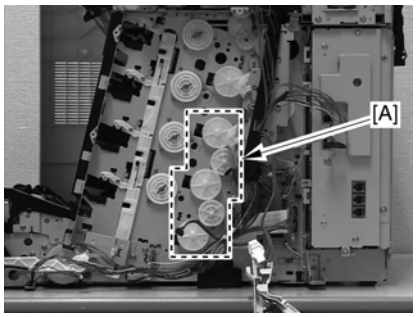
⚠
Do not disassemble the main drive unit in the field.
Disassembling it may cause a functional fault.

8.5.2.3 Point to Note When Installing the Main Drive Unit

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1. Alignment of the gears in the main drive unit

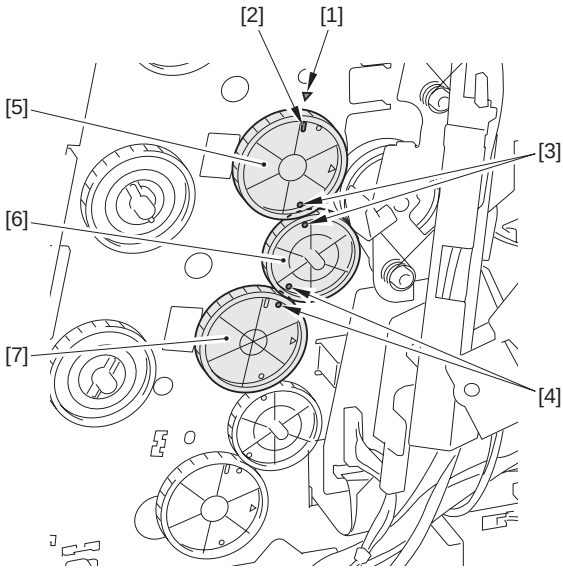
When installing the main drive unit, the corresponding gears of the host machine [A] need to be interlocked in order starting from the top of the 5 gears.



F-8-48

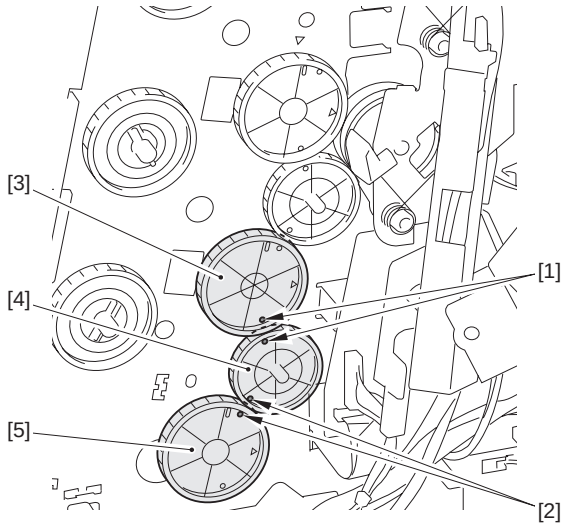
Following shows the procedure:

1) Align the gear [5]'s elongate hole [2] with the triangle [1].
2) Interlock the teeth of the gears [5] and [6] so that the holes [3] of the gears will lie right next to each other.
3) Interlock the teeth of the gears [6] and [7] so that the holes [4] of the gears will lie right next to each other.



F-8-49

4) Interlock the teeth of the gears [3] and [4] so that the holes [1] of the gears will lie right next to each other.
5) Interlock the teeth of the gears [4] and [5] so that the holes [2] of the gears will lie right next to each other.



F-8-50

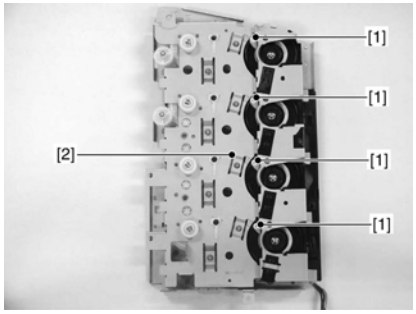
⚠
When interlocking the gears [A], the teeth of the gears must be aligned completely.

2. Alignment of the main drive unit as Service Parts

When removing the shipping lock that is attached with the main drive unit as a Service Parts, or when removing the main drive unit for servicing, the

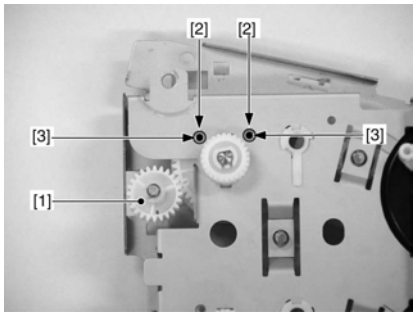
main drive unit must be aligned before installing to the host machine.

1) Shift the 4 levers [1] of the main drive unit [2] upward.



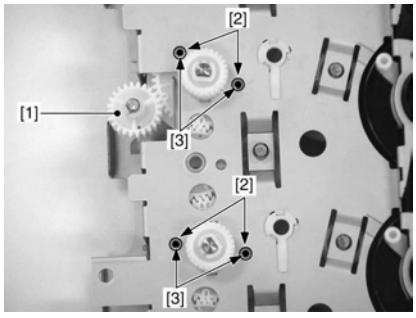
F-8-51

2) Turn the gear [1] and align the holes [2] and the circles [3] each in 2 locations.



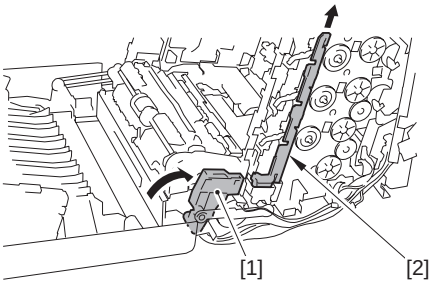
F-8-52

3) Turn the gear [1] and align the holes [2] and the circles [3] each in 2 locations.



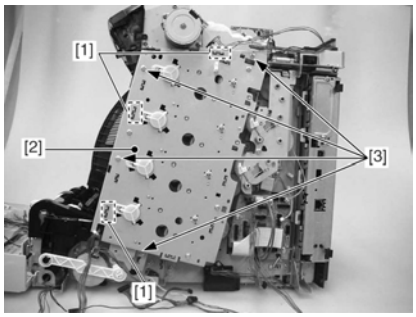
F-8-53

4) Lift the drawer connector [1] and move the shutter arm [2] to upper.



F-8-54

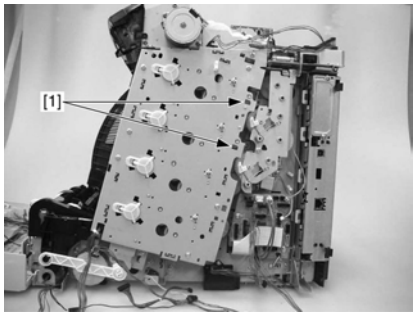
5) Align the 3 positioning parts [1] and install the main drive unit [2] with parallel to the side of the host machine.
- 4 screws [3]



F-8-55

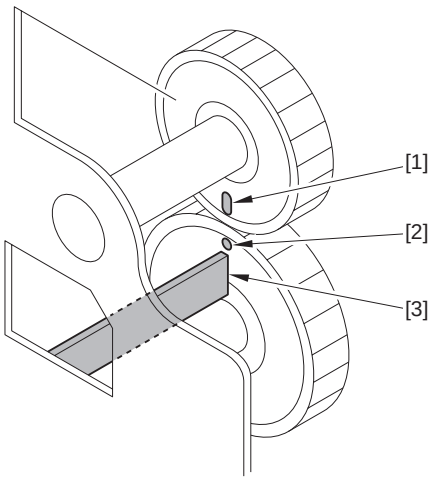
Since 5 interlocked gears [A] on the host machine are easy to disengage, be careful not to displace the alignment of gears when installing the main drive unit to the host machine.

6) Confirm that the gear positions are properly aligned by checking from the 2 windows [1].



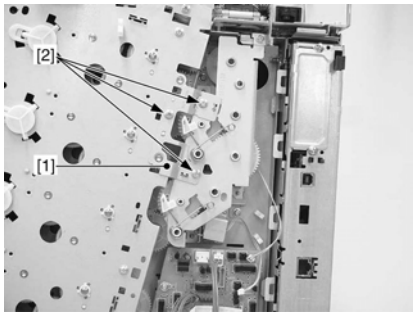
F-8-56

Alignment is adjusted properly if the elongate holes of the gears [1] and [2] and the plate [3] are aligned in a straight line as shown in the figure below.



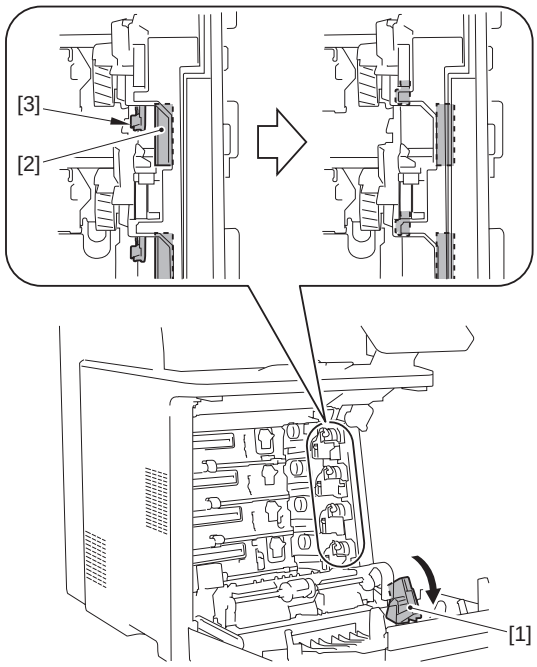
F-8-57

7) Install the plate [1].
- 3 screws [2]



F-8-58

Move the drawer connector [1] at the right side to check that the couplings [2] and the lock [3] of the toner cartridge for the four colors; BK, Y, C, and M work with each other.



8.5.3 Developing Estrangement Solenoid

8.5.3.1 Before Removing the Developing Disengage Solenoid

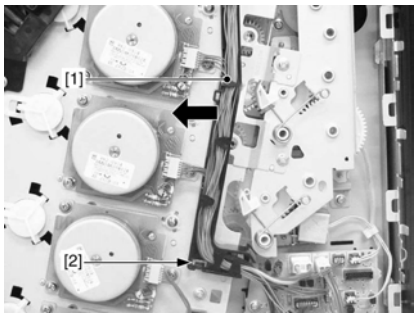
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
3) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]

8.5.3.2 Removing the Developing Disengage Solenoid

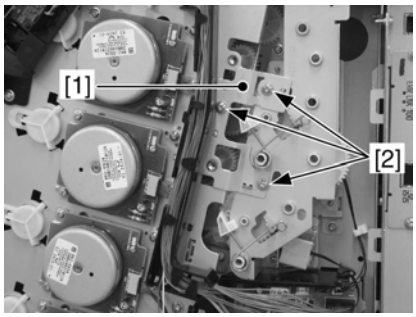
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the claw [2] to move the cable guide [1] toward the left.



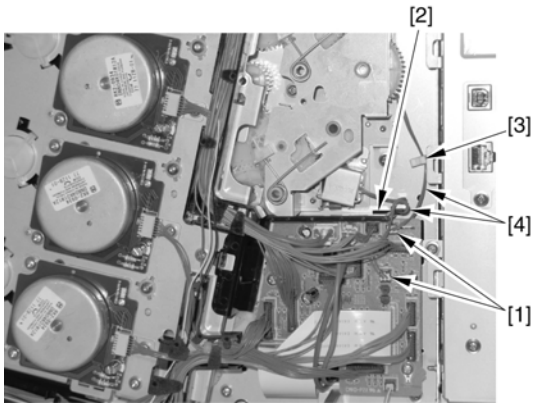
F-8-59

2) Remove the plate [1].
- 3 screws [2]



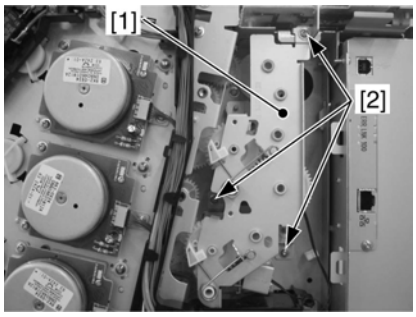
F-8-60

3) Disconnect the 2 connectors [1] and free the harness [4] from the harness guide [2] and the wire saddle [3].



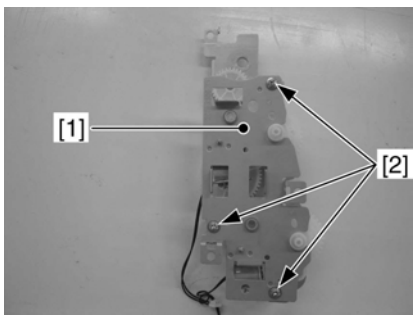
F-8-61

4) Remove the developing disengage drive unit [1].
- 3 screws [2]



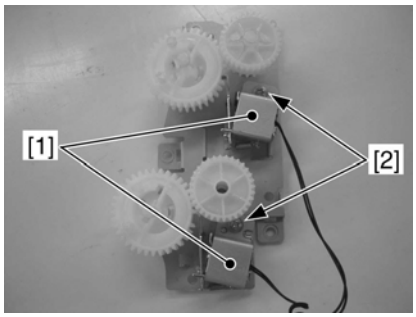
F-8-62

5) Remove the plate [1].
- 3 screws [2]



F-8-63

6) Remove the 2 developing disengage solenoids [1].
- 2 screws [2]



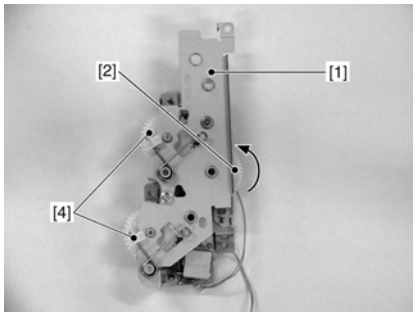
F-8-64

8.5.3.3 Points to Note When Installing the Developing Disengage Solenoid

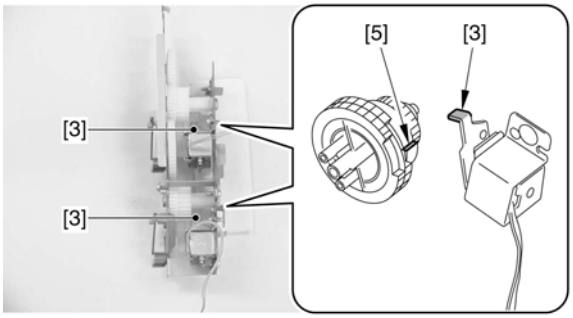
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Alignment of Developing Disengage Drive Unit

1. Alignment in assembling the developing disengage drive unit
   Turn the gear [2] of the developing disengage drive unit [1] in the direction of the arrow, and align the solenoid claw [3] with the cutoff [5] in the gear (home position).

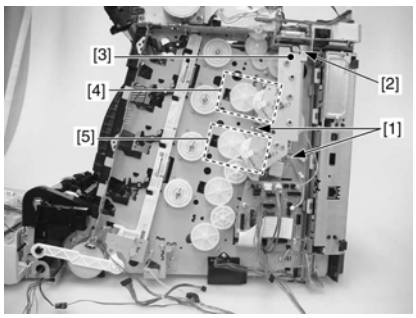


F-8-65



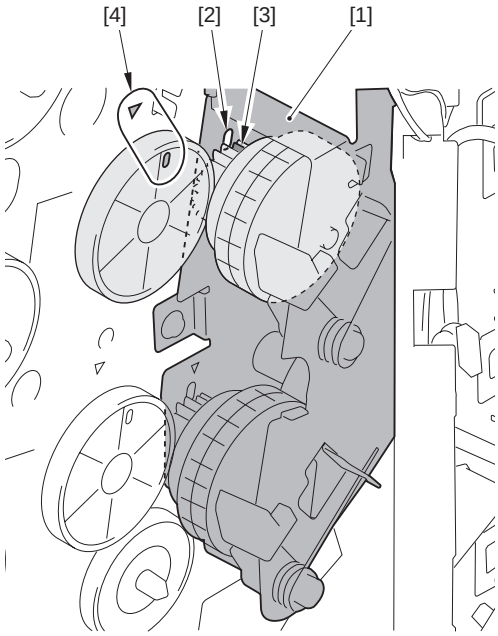
F-8-66

   When the developing disengage drive unit is properly set to its home position, the gear [4] does not rotate if turning the gear [2], and there will be no sense of resistance when rotating the gear [2].
2. Alignment in installing the developing disengage drive unit
   When installing the developing disengage drive unit while the main drive unit is removed, the corresponding gears of the host machine need to be aligned (interlocked).
   Tighten the 2 screws [1] to the developing disengage drive unit [3] and tighten the screw [2] halfway to confirm the alignment of the gear [4] and the gear [5].



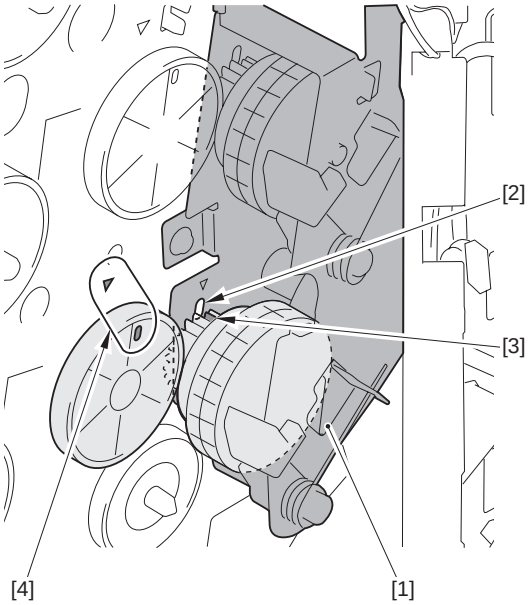
F-8-67

   Confirming the alignment of the gear [4]
   There is a small-toothed gear [3] in the developing disengage drive unit [1]. Make sure that the small-toothed gear is aligned with the elongate hole [2] (home position). Also, as shown in the figure [4], make sure that the triangle and the elongate hole of the gear lie right next to each other.



F-8-68

   Confirming the alignment of the gear [5]
   There is a small-toothed gear [3] in the developing disengage drive unit [1]. Make sure that the small-toothed gear is aligned with the elongate hole [2] (home position). Also, as shown in the figure [4], make sure that the triangle and the elongate hole of the gear lie right next to each other.



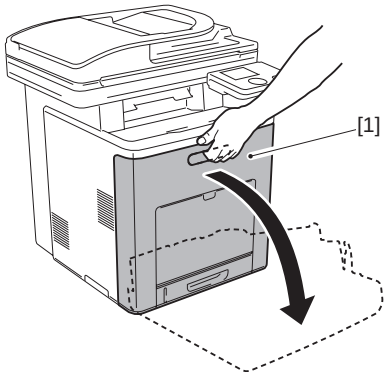
F-8-69

8.5.4 ETB Unit

8.5.4.1 Removing the ETB Unit

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

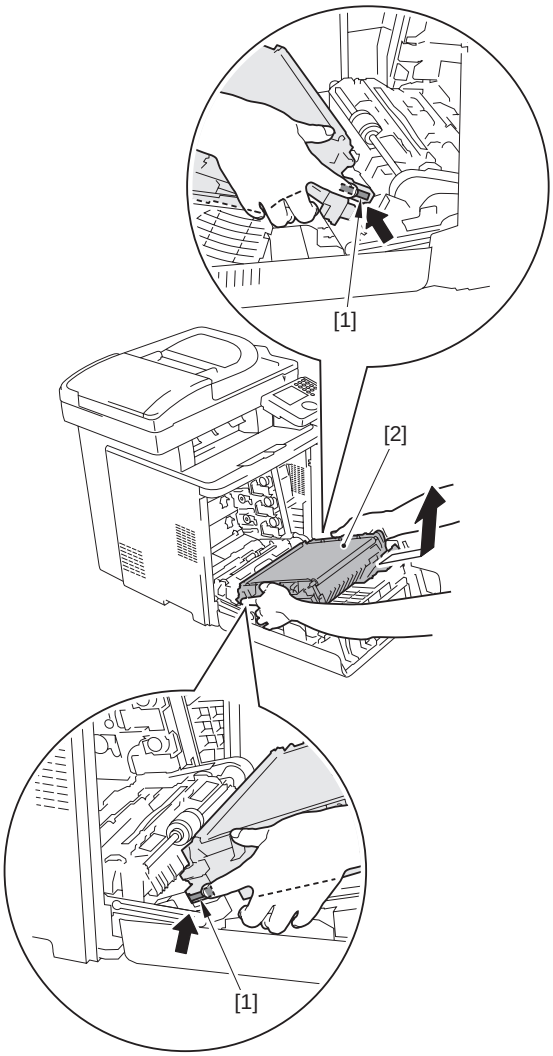
1) Open the front cover [1].



F-8-70

2) While pushing the ETB lock lever [1] (2 points at left and right), remove the ETB unit [2].

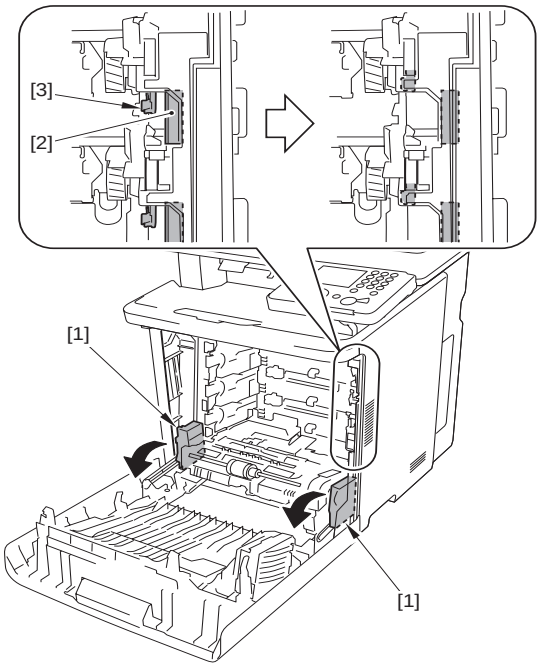
Points to Note At Handling
Be careful not to touch the surface of the ETB belt or damage it.
Dirts or small cuts on the belt may cause image faults.



F-8-71

When closing the front cover with the ETB unit removed and then and opening it, the drawer connector [1] faces upward. The drawer connector facing upward may cause the following symptoms; and therefore, be sure to put down the 2 drawer connectors [1] if necessary.

- When the toner cartridge is not removed
The shutter of the toner cartridge is opened, resulting in deteriorated sensitivity of the photosensitive drum.
- When the toner cartridge is removed
The coupling [2] and lock mechanism [3] of the toner cartridge works together and the toner cartridge cannot be installed.



8.5.5 ETB Motor

8.5.5.1 Before Removing the ETB Motor

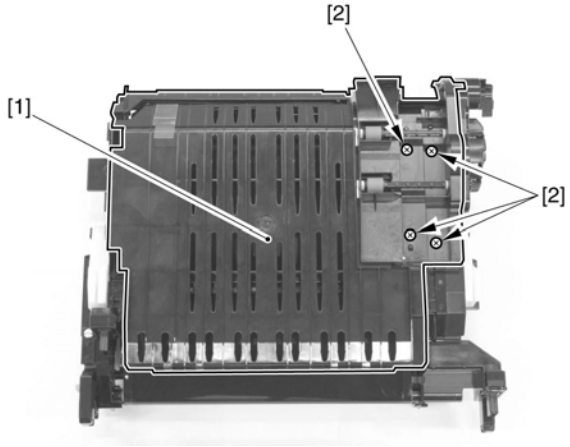
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]

8.5.5.2 Removing the ETB Motor

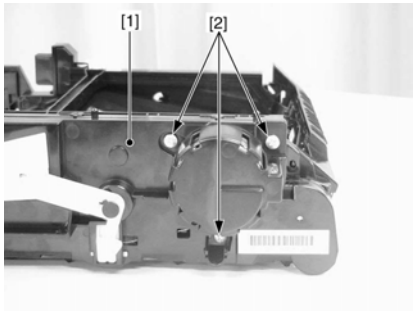
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the duplex delivery assembly [1].
- 4 screws [2]

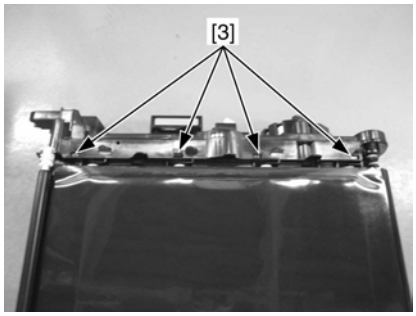


F-8-72

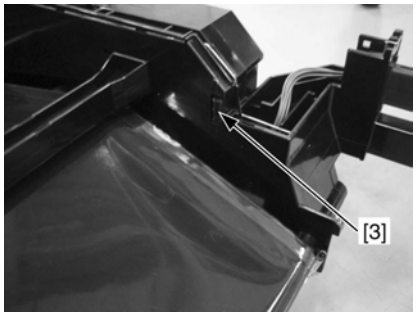
2) Remove the ETB right cover [1]
-3 screws [2]
-5 claws [3]



F-8-73

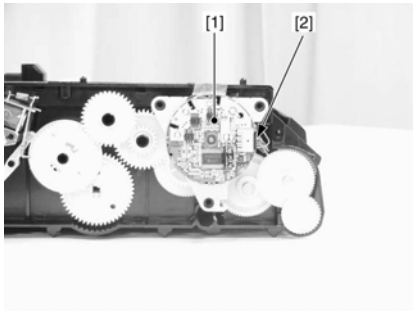


F-8-74



F-8-75

3) Remove the ETB motor [1].
- 1 connector [2]



F-8-76

8.5.6 ETB Estrangement Solenoid

8.5.6.1 Before Removing the ETB Disengage Solenoid

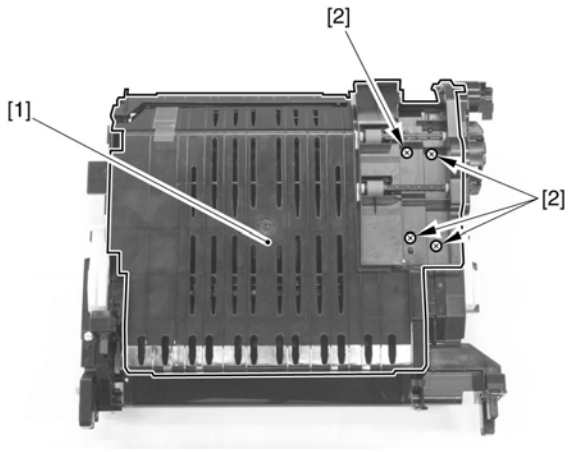
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]

8.5.6.2 Removing the ETB Disengage Solenoid

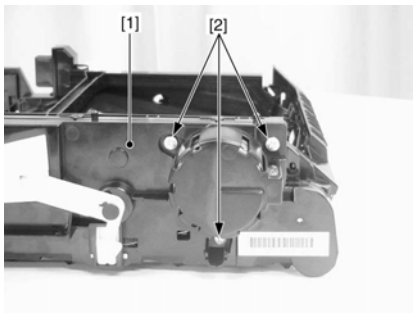
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the duplex delivery assembly [1].
- 4 screws [2]

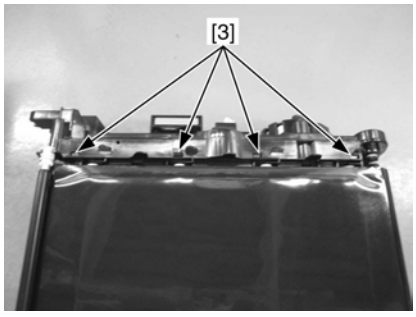


F-8-77

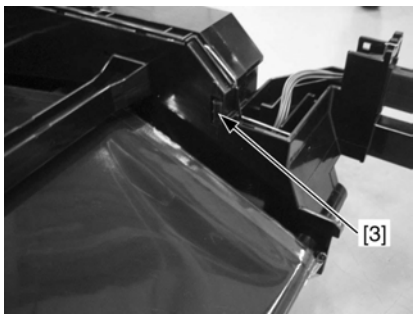
2) Remove the ETB right cover [1].
- 3 screws [2]
- 5 claws [3]



F-8-78

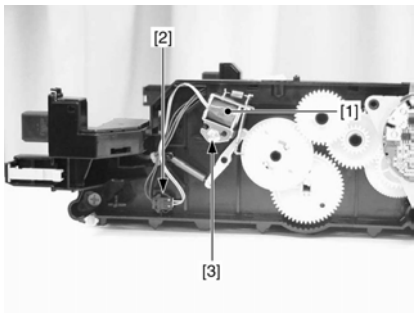


F-8-79



F-8-80

3) Remove the ETB disengage solenoid [1].
- 1 connector [2]
- 1 screw [3]



F-8-81

8.5.7 Color Displacement/Image Density Sensor

8.5.7.1 Before Removing the Color Displacement/Density Sensor

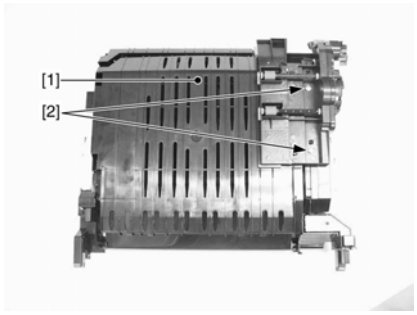
imageRUNNER C1022 / imageRUNNER C1022i

1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]

8.5.7.2 Removing the Color Displacement/Density Sensor

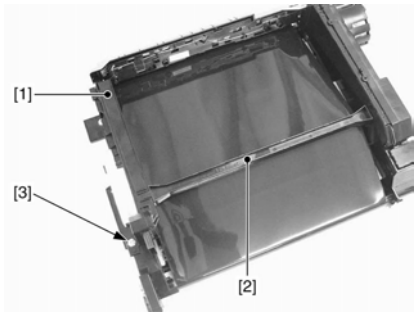
imageRUNNER C1022 / imageRUNNER C1022i

1) Remove the duplex delivery assembly [1].
- 2 screws [2]



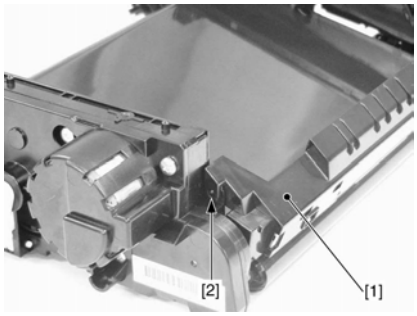
F-8-82

2) Remove the cover [1] and the stay [2].
- 1 screw [3]



F-8-83

3) Remove the color displacement/density sensor [1].
- 1 claw [2]



F-8-84

Chapter 9 Pickup and Feed System

Contents

9.1 Overview/Configuration 9-1
9.1.1 Overview 9-1
9.1.2 Interval Speed Increase Control 9-3
9.1.3 Interval Speed Increase Control 9-4
9.2 Other Control 9-5
9.2.1 Cassette Pickup Mechanism 9-5
9.2.2 Manual Feed Pickup Mechanism 9-6
9.2.3 Skew Correction 9-7
9.2.4 Throughput-down Control 9-8
9.2.5 Throughput-down Control 9-9
9.2.6 Feeding Speed Control 9-10
9.2.7 Feeding Speed Control 9-10
9.2.8 Warp Control 9-10
9.2.9 Delivery 9-12
9.3 Detection Jams 9-14
9.3.1 Jam Detection Outline 9-14
9.3.1.1 Overview 9-14
9.3.2 Delay Jams 9-14
9.3.2.1 Pickup Delay JAM 9-14
9.3.2.2 Delivery Delay JAM 9-14
9.3.2.3 Duplexing Pickup Delay JAM 9-14
9.3.2.4 Duplexing Reverse Unit Delay JAM 9-14
9.3.3 Stationary Jams 9-15
9.3.3.1 Pickup Stationary JAM 9-15
9.3.3.2 Delivery Stationary JAM 9-15
9.3.4 Other Jams 9-15
9.3.4.1 Wrapping JAM 9-15
9.3.4.2 Residual JAM 9-15
9.3.4.3 Door Open JAM 9-15
9.3.4.4 Automatic Delivery Function 9-15
9.4 Duplex Feeding 9-16
9.4.1 Overview 9-16
9.4.2 Duplexing Feed Control 9-17
9.4.3 Duplexing Pickup Operation 9-20
9.5 Parts Replacement Procedure 9-21
9.5.1 Pickup Feed Unit 9-21
9.5.1.1 Before Removing the Pickup Feed Unit 9-21
9.5.1.2 Removing the Pickup Feed Unit 9-21
9.5.2 Cassette Pickup Roller 9-22
9.5.2.1 Before Removing the Cassette Pickup Roller 9-22
9.5.2.2 Removing the Cassette Pickup Roller 9-22
9.5.3 Pickup Motor 9-23
9.5.3.1 Before Removing the Pickup Motor 9-23
9.5.3.2 Removing the Pickup Motor 9-23
9.5.4 Cassette Pickup Solenoid 9-24
9.5.4.1 Before Removing the Cassette Pickup Solenoid 9-24
9.5.4.2 Removing the Cassette Pickup Solenoid 9-24
9.5.5 Cassette Separation Pad 9-26
9.5.5.1 Removing the Cassette Separation Pad 9-26
9.5.6 Manual Pickup Roller 9-26
9.5.6.1 Before Removing the Manual Feed Pickup Roller 9-26
9.5.6.2 Removing the Manual Feed Pickup Roller 9-26

9.5.7 Manual Pickup Solenoid 9-26
9.5.7.1 Before Removing the Manual Feed Pickup Solenoid 9-26
9.5.7.2 Removing the Manual Feed Pickup Solenoid 9-26
9.5.8 Manual Separation Roller 9-28
9.5.8.1 Before Removing the Manual Feed Separation Pad 9-28
9.5.8.2 Removing the Manual Feed Separation Pad 9-28
9.5.9 Duplexing Feed Motor 9-29
9.5.9.1 Before Removing the Duplex Feed Motor 9-29
9.5.9.2 Removing the Duplex Feed Motor 9-29
9.5.10 Reverse Unit 9-29
9.5.10.1 Before Removing the Reversal Unit 9-29
9.5.10.2 Removing the Reversal Unit 9-29
9.5.11 Reverse Motor 9-31
9.5.11.1 Before Removing the Reversal Motor 9-31
9.5.11.2 Removing the Reversal Motor 9-31
9.5.12 Reverse Solenoid 9-31
9.5.12.1 Before Removing the Reversal Solenoid 9-31
9.5.12.2 Removing the Reversal Solenoid 9-31

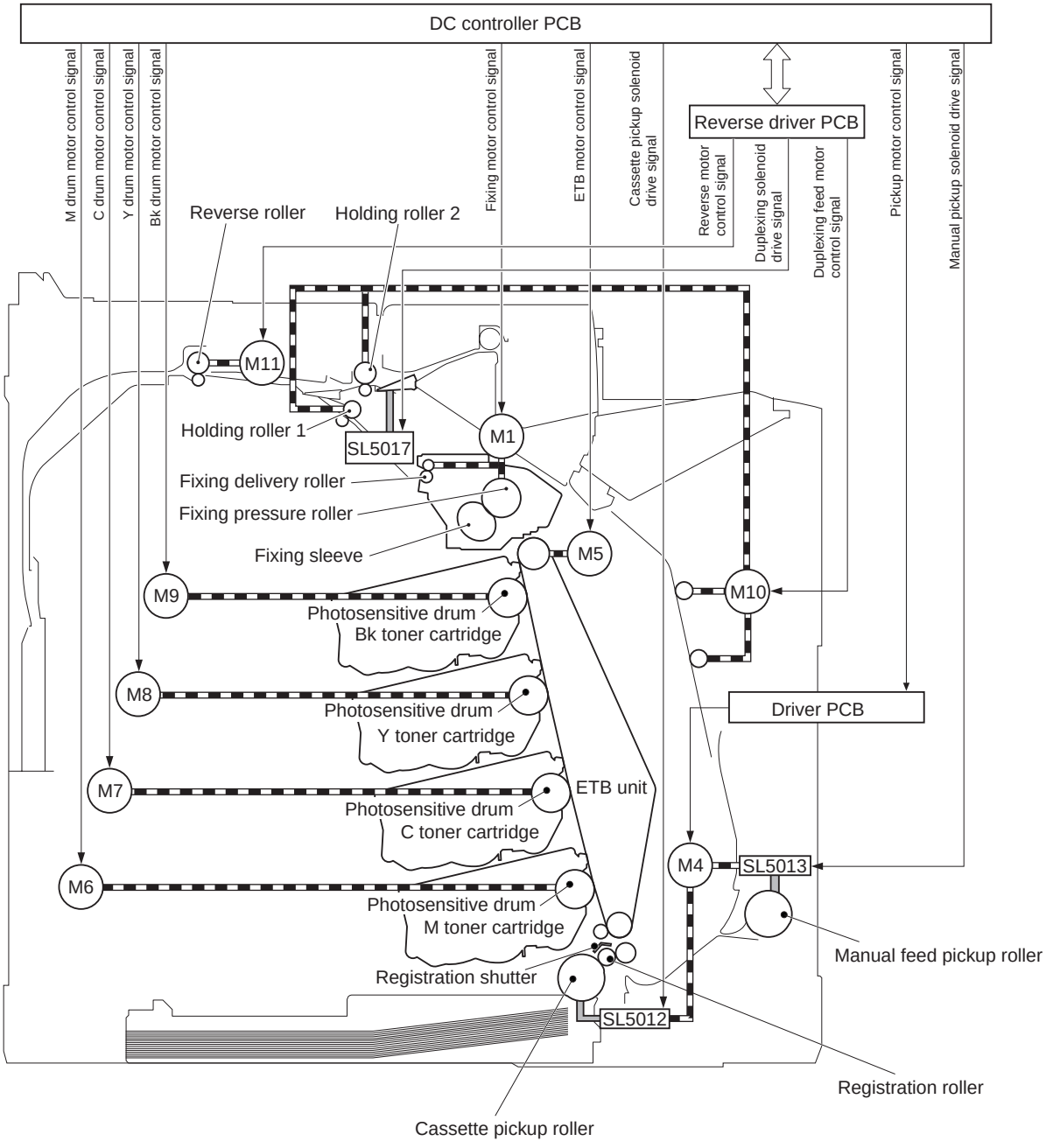
9.1 Overview/Configuration

9.1.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The pickup/feed system picks up and feeds paper.
The machine has two pickup inlets; a cassette and a manual feed tray, and the paper is delivered to the delivery tray.

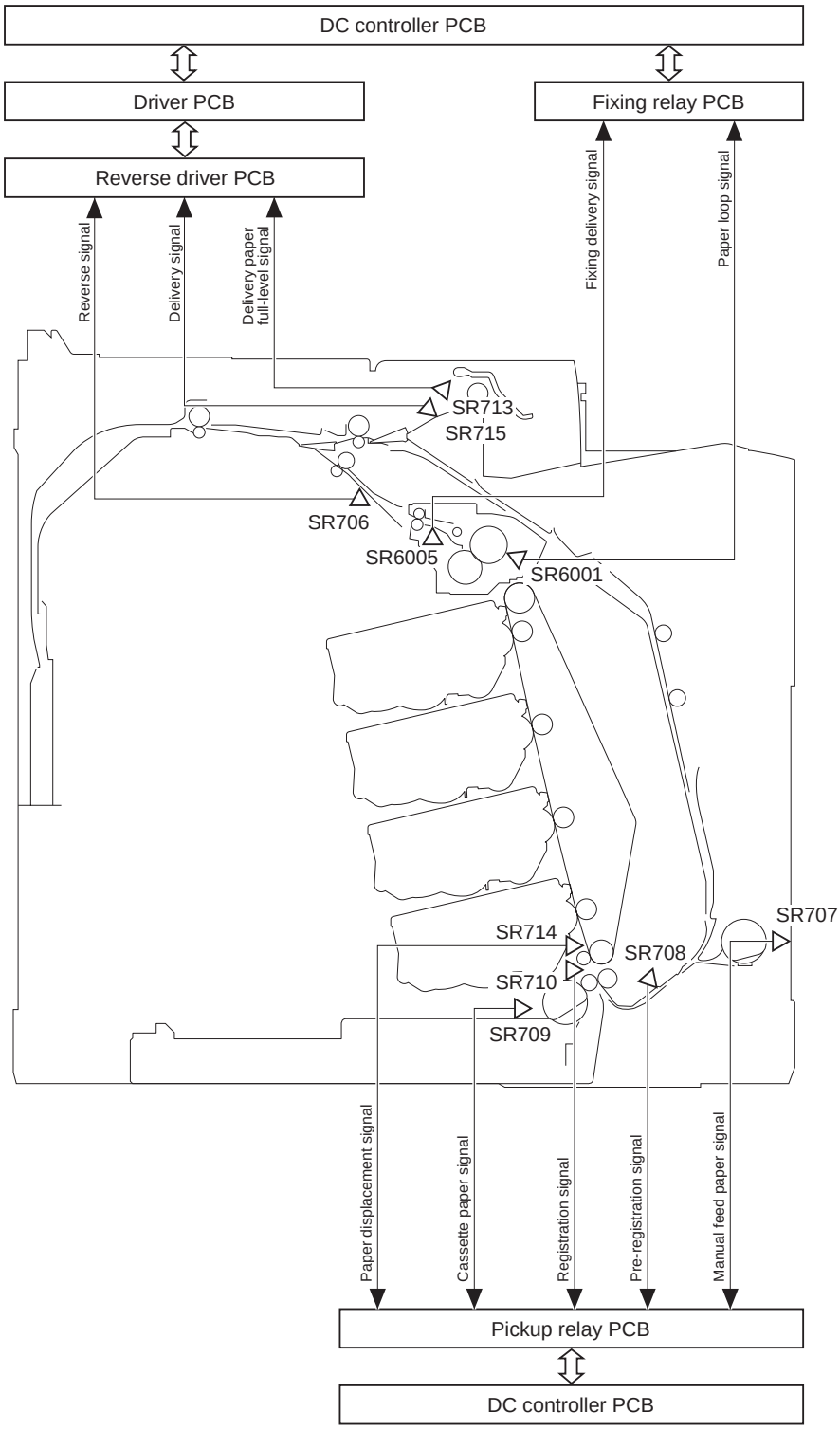
The pickup/feed system consists of the motor, solenoid, and feed roller, etc.
The reverse unit and duplexing feed assembly are controlled by the reverse driver PCB. Other motors, solenoids, and feed rollers are controlled by the DC controller.



F-9-1

M1:	Fixing motor	M4:	Pickup motor
M5:	ETB motor	M6-9:	Drum motors (magenta, cyan, yellow, black)
M10:	Duplexing feed motor	M11:	Reverse motor
SL5012:	Cassette pickup solenoid	SL5013:	Manual pickup solenoid
SL5017:	Duplexing solenoid		

The cassette detection switch (SW2) detects the presence/absence of the cassette.
The manual feed paper sensor (SR707) and the cassette paper sensor (SR709) detect the presence/absence of the paper in the manual feed tray and the cassette.
The reverse sensor (SR706), pre-registration sensor (SR708), registration sensor (SR710), paper loop sensor (SR6001), and fixing delivery sensor (SR6005) detect the arrival and passage of the paper on the feed path.
The delivery paper full-level sensor (SR713) and delivery sensor (SR715) detect the condition of the delivery outlet.
The machine also has the paper displacement sensor (SR714).
When reverse operation is performed to feed paper for printing of the second page during duplexing printing, the machine controls the duplexing solenoid (SL5017) and uses the registration sensor (SR710).



F-9-2

SR706:	Reverse sensor	SR707:	Manual feed paper sensor
SR708:	Pre-registration sensor	SR709:	Cassette paper sensor
SR710:	Registration sensor	SR713:	Delivery paper full-level sensor
SR714:	Paper displacement sensor	SR715:	Delivery sensor(Reverse sensor2)
SR6001:	Paper loop sensor	SR6005:	Fixing delivery sensor

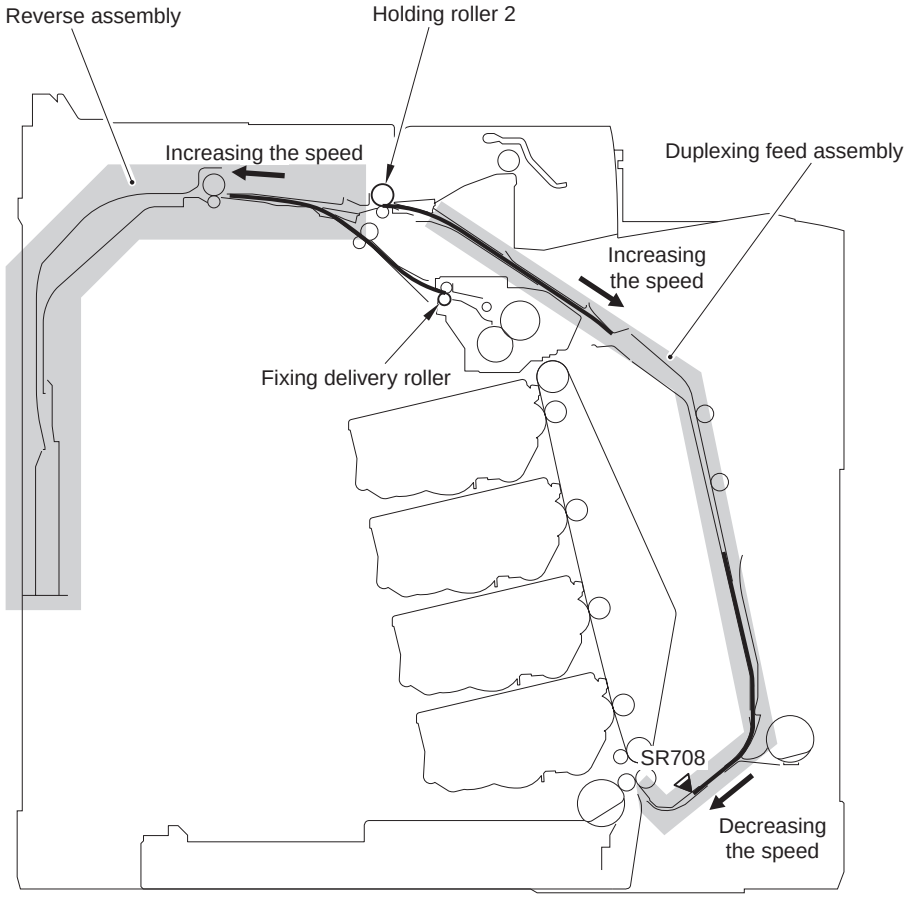
9.1.2 Interval Speed Increase Control

imageRUNNER C1022 / imageRUNNER C1022i

To increase printing speed, the machine increases the speed in an interval which does not affect image formation.
The DC controller increases the process speed four times faster when the paper is fed to the reverse assembly. It also increases the process speed of duplex printing four times faster at the duplex feed assembly.

T-9-1

Timing	Single-sided printing	Duplex printing
Timing of increasing the speed	After the trailing edge of the paper passes through the fixing delivery roller	After the trailing edge of the paper passes through the fixing delivery roller
Timing of decreasing the speed	After the trailing edge of the paper passes through the holding roller 2	When the leading edge of the paper reaches the pre-registration sensor



F-9-3

SR708: pre-registration sensor

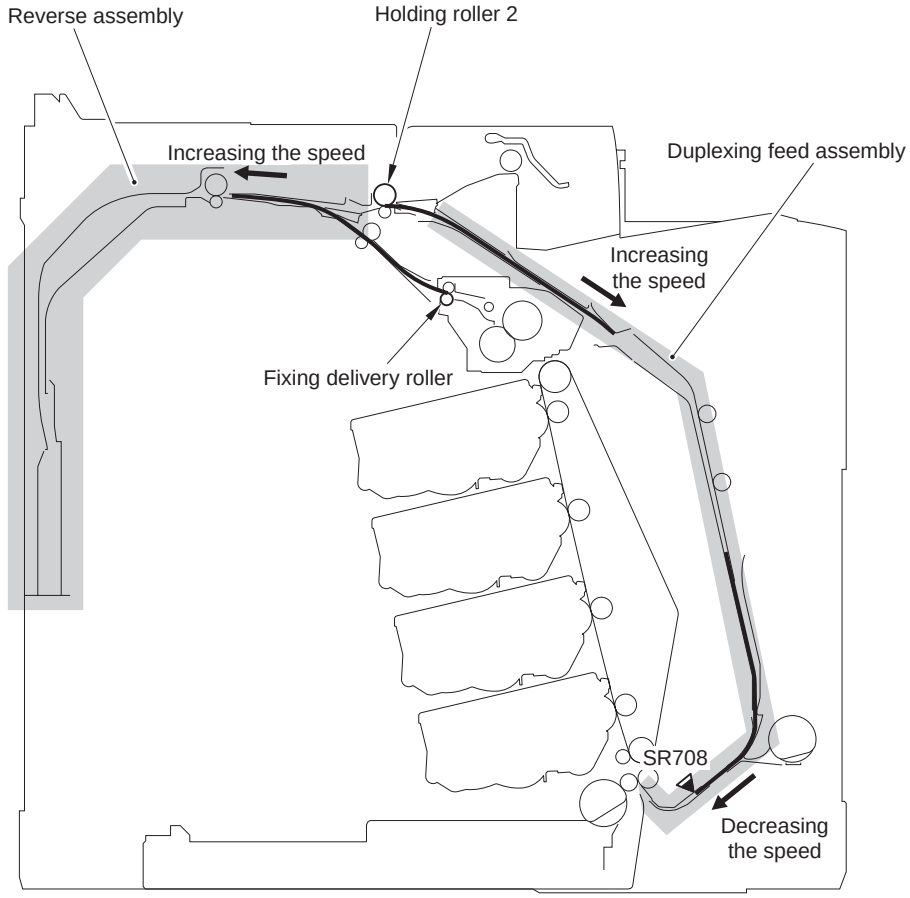
9.1.3 Interval Speed Increase Control

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

When paper is fed to the Reverse Assembly, DC Controller accelerates process speed approx. 4 times faster for color and 3 times faster for B&W.In addition, process speed is accelerated approx. 4 times faster for both color and B&W at Delivery Assembly. In the case of 2-sided print, process speed is accelerated approx. 4 times faster for color and 5 times faster for B&W at Duplex Feed Assembly.

T-9-2

Timing	Single-sided printing	Duplex printing
Timing of increasing the speed	After the trailing edge of the paper passes through the fixing delivery roller	After the trailing edge of the paper passes through the fixing delivery roller
Timing of decreasing the speed	After the trailing edge of the paper passes through the holding roller 2	When the leading edge of the paper reaches the pre-registration sensor



F-9-4

SR708: pre-registration sensor

9.2 Other Control

9.2.1 Cassette Pickup Mechanism

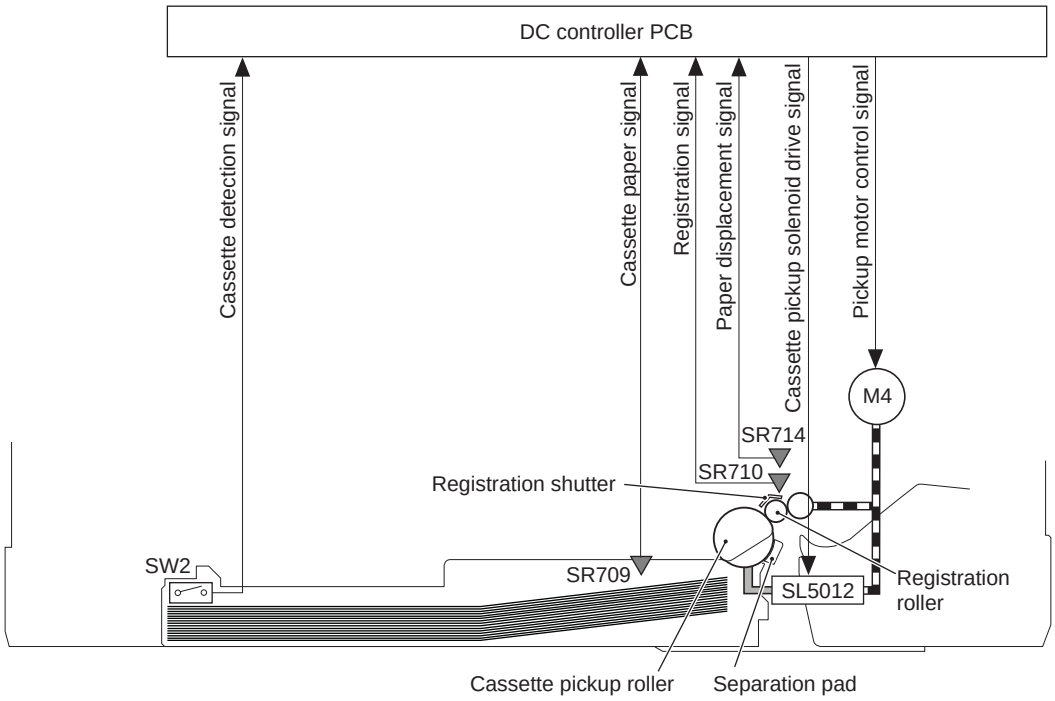
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The cassette pickup is a mechanism to pick up and feed the paper loaded in the cassette into the machine one by one.
The pickup condition is detected by the following sensors or switch.

- Cassette detection switch (SW2): Detects the presence/absence of the cassette.
- Cassette paper sensor (SR709): Detects the presence/absence of the paper in the cassette.
- Registration sensor (SR710): Detects the lead edge of the fed paper.
- Paper displacement sensor (SR714): Detects the paper displacement.

Cassette pickup operation

1) The main controller sends a print command to the DC controller.
2) The DC controller drives the pickup motor (M4).
3) The DC controller turns ON the cassette pickup solenoid (SL5012).
   When the drive is sent from the pickup motor, the cassette pickup roller rotates.
   In this condition, double-fed paper is removed by using the mechanism of oblique surface separation and the separation pad, and the paper is fed one by one.
4) The paper is transported to the ETB unit after the skew is corrected by the registration roller and registration shutter.



F-9-5

9.2.2 Manual Feed Pickup Mechanism

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The manual feed pickup is a mechanism to pick up and feed the paper loaded on the manual feed tray into the machine one by one.
The pickup condition is detected by the following sensors or switch.

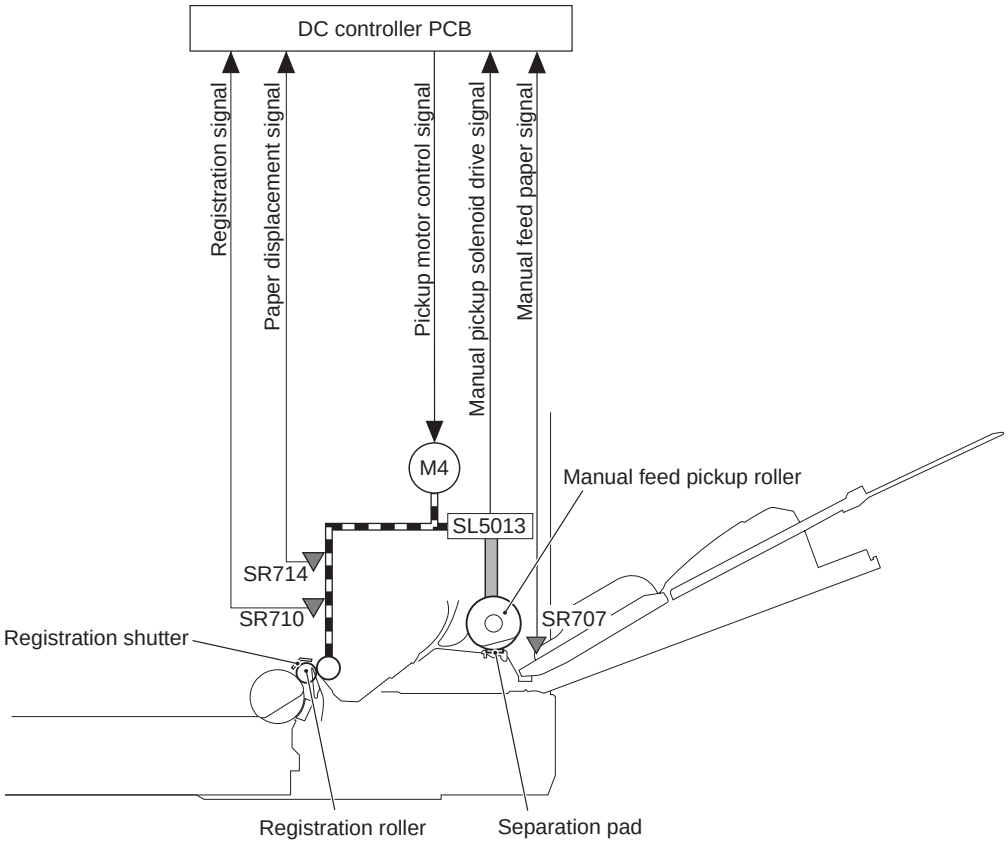
- Cassette detection switch (SW2): Detects the presence/absence of the cassette.
- Manual feed paper sensor (SR707): Detects the presence/absence of the paper on the manual feed tray.
- Registration sensor (SR710): Detects the lead edge of the fed paper.
- Paper displacement sensor (SR714): Detects the paper displacement.

> **MEMO:**
> Since a cassette is included in the feed path for manual feed pickup, it is necessary to attach the cassette when manual feed pickup is performed.

Up to 100 sheets of paper (75 g/m2) can be fed from the manual feed pickup inlet.

Manual feed pickup operation

1) The main controller sends a print command to the DC controller.
2) The DC controller drives the pickup motor (M4).
3) The DC controller turns ON the manual feed pickup solenoid (SL5013).
   When the drive is sent from the pickup motor, the manual feed pickup roller rotates.
   In this condition, double-fed paper is removed by the separation pad, and the paper is fed one by one.
4) The paper is transported to the ETB unit after the skew is corrected by the registration roller and registration shutter.

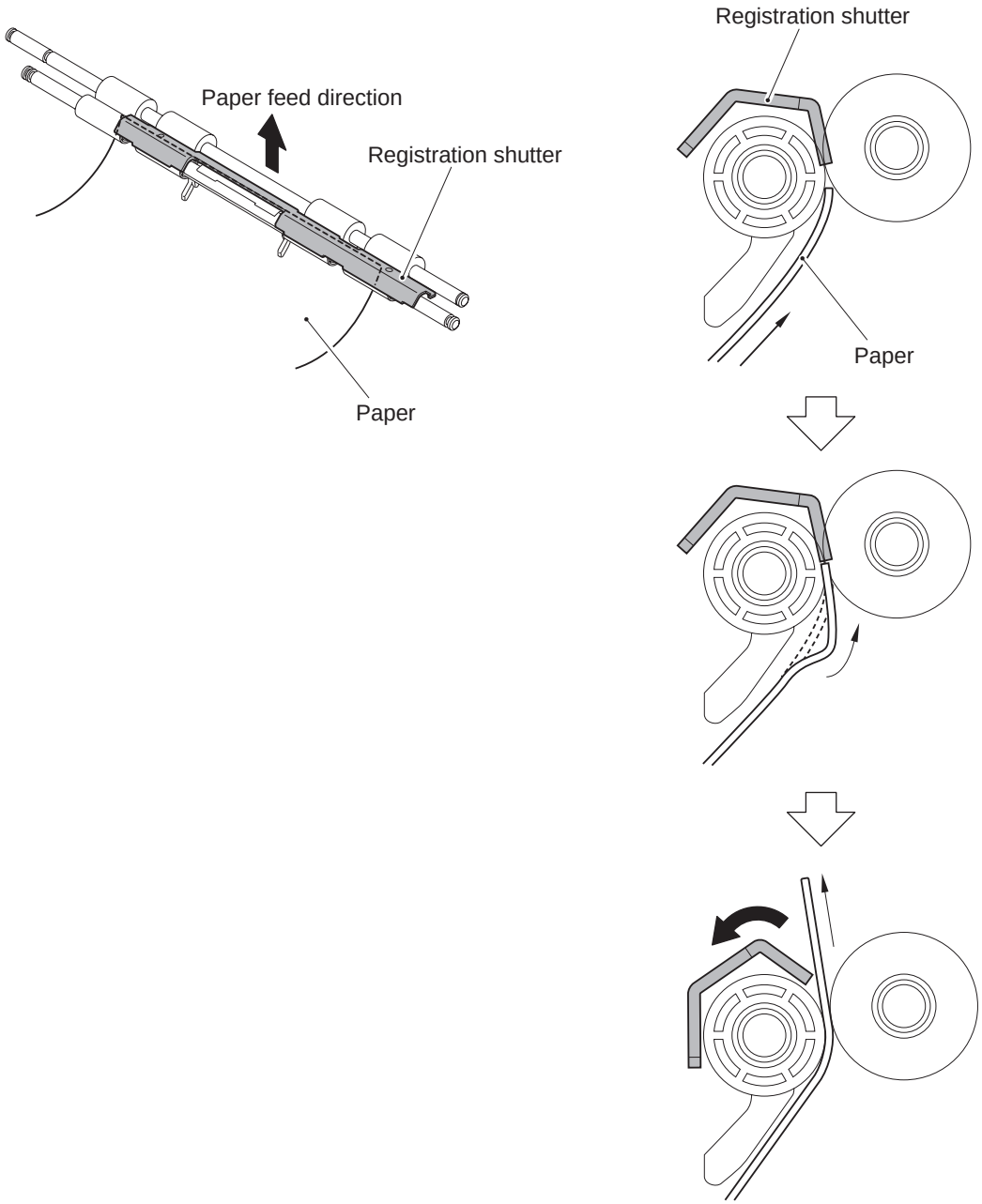


F-9-6

9.2.3 Skew Correction

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Before the paper fed from the cassette or manual feed tray is transported to the ETB unit, a skew is corrected.
1) The fed paper comes into contact with the registration shutter at the registration roller assembly.
The lead edge of the paper comes into contact with the registration shutter so that the right and left edges of the paper are aligned.
2) The paper is warped because the paper path is obstructed by the registration shutter.
Since the registration shutter is pressed by springs, the registration shutter does not move only with the power of the sheet trying to move ahead.
When the paper is warped, the stiffness of the paper is applied in addition to the power of trying to move ahead, which increases the power of lifting up the registration shutter.
3) When the power exceeding a specified level is applied to the paper, the registration shutter is lifted up.
In this condition, the paper is transported while keeping the right and left edges being aligned, and the skew is corrected.



F-9-7

9.2.4 Throughput-down Control

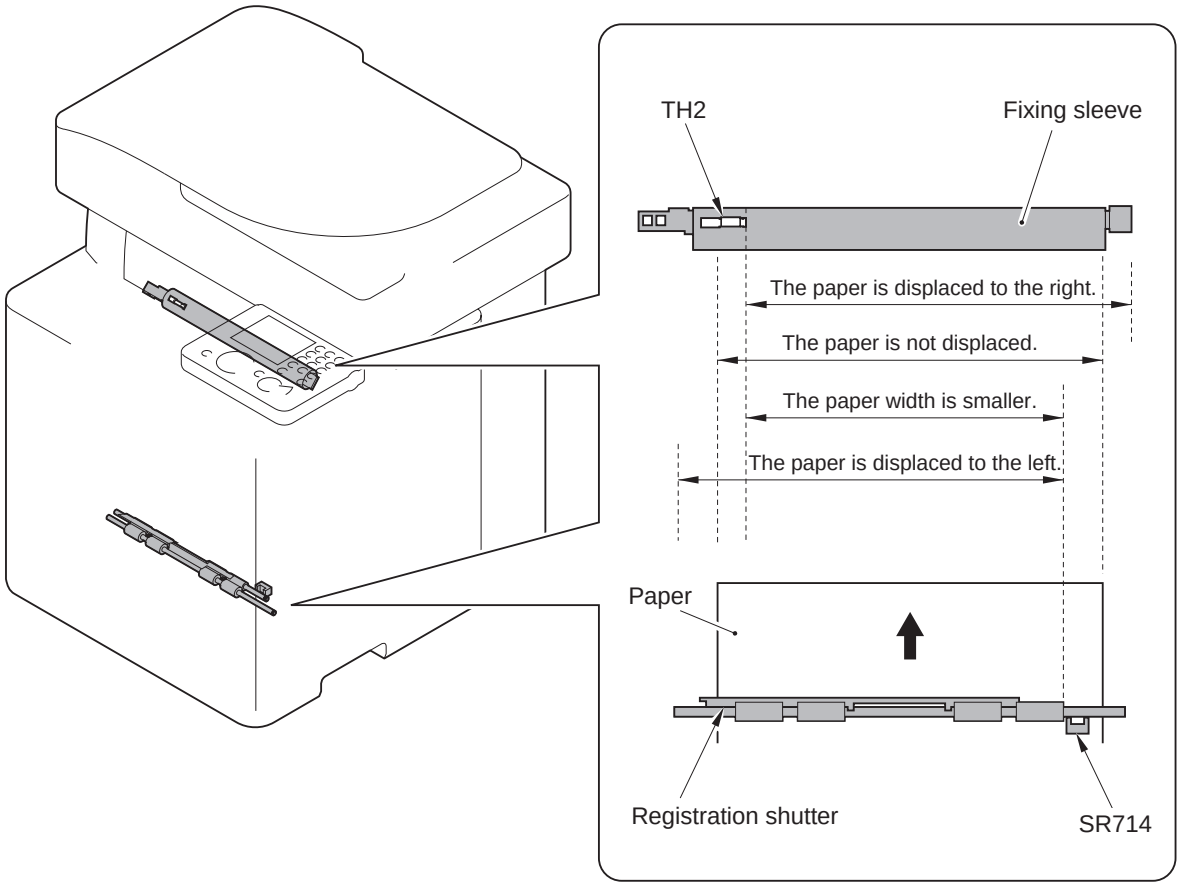
imageRUNNER C1022 / imageRUNNER C1022i

The machine prevents an abnormal temperature increase at the edge of the fixing sleeve by increasing an interval between sheets while keeping the paper feeding speed as needed.

Control of the fixing assembly is performed to keep the temperature of the fixing heater higher than the target temperature while the paper is transported so that the target fixing temperature is maintained (print temperature control).
When the paper is displaced to one side, the paper does not pass a certain area at the edge of the fixing sleeve. In this area, no heat is transported to the paper, causing temperature increase every time the paper passes the area.
Even when the temperature of the fixing heater is set lower than the target temperature between sheets (control of temperature between sheets), the effect of temperature increase is reinforced when continuous printing is performed, and therefore an abnormal temperature increase occurs at the edge of the fixing sleeve.
To prevent an abnormal temperature increase, the machine increases an interval between sheets when the paper is fed displaced to one side, and promotes a temperature decrease between sheets.

The machine uses the paper displacement sensor (SR714) located at the right side of the registration shutter in order to detect the paper displacement.
The sensor detects whether the paper width is smaller than the specified paper width or whether the paper is displaced to the left side of the feed path.

Whether the paper width is smaller than the specified paper width or whether the paper is displaced to the right side of the feed path can be detected by the fixing sub thermistor (TH2) because an abnormal temperature increase occurs at the left edge of the fixing sleeve.



F-9-8

Different throughput-down controls are executed depending on the result of detection performed by the paper displacement sensor and fixing sub thermistor.

T-9-3

Paper displacement	**The paper is displaced to the left side**	**The paper width is smaller *1**	**The paper is not displaced**	**The paper is displaced to the right side**
Paper displacement detection sensor (SR714)	**No paper detection is performed**		**Paper detection is performed**	
Fixing sub thermistor (TH2)	**Lower than the specified temperature**	**Higher than the specified temperature**	**Lower than the specified temperature**	**Higher than the specified temperature**
Throughput-down control	Instantly executed (the lowest value)	Executed step by step	No throughput-down control performed	No throughput-down control performed *2

*1: For the universal-size paper or the paper of which width is smaller than A4-size, an interval between sheets is changed step by step according to the temperature detected by the fixing sub thermistor.
*2: Although throughput-down control is not performed, a restriction is applied to the power supplied to the fixing heater.

Print speed when the throughput down control is executed
When the throughput down control is ON, print speed is switched step by step depending on the paper type or the temperature on the edge of the fixing sleeve etc. Following shows the print speed list in case of the minimum throughput.

T-9-4

Paper		Print speed (ppm)			
Type	Size	1st level	2nd level	3rd level	Last level
Plain paper/Plain paper H/Recycled paper/Color paper	B5R/A5R/EXECR	20.2	4.6	3.5	2.86
Heavy paper 1/Heavy paper 2/Rough paper	B5R/A5R/EXECR	16.1	4.4	3.4	2.76
Transparency	-	3.6	2.4	-	1.8
Postcard/Return postal card	-	10.1	3.8	3	2.5

9.2.5 Throughput-down Control

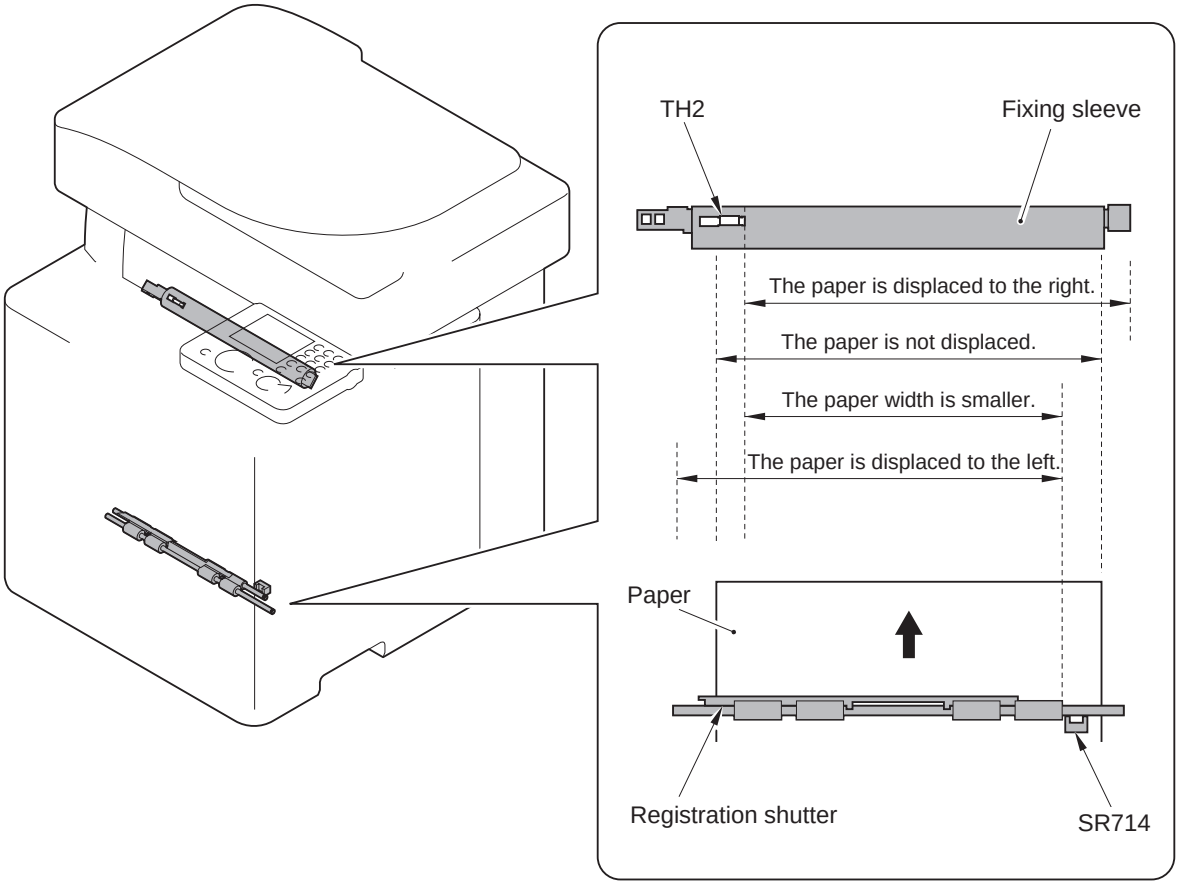
Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine prevents an abnormal temperature increase at the edge of the fixing sleeve by increasing an interval between sheets while keeping the paper feeding speed as needed.

Control of the fixing assembly is performed to keep the temperature of the fixing heater higher than the target temperature while the paper is transported so that the target fixing temperature is maintained (print temperature control).
When the paper is displaced to one side, the paper does not pass a certain area at the edge of the fixing sleeve. In this area, no heat is transported to the paper, causing temperature increase every time the paper passes the area.
Even when the temperature of the fixing heater is set lower than the target temperature between sheets (control of temperature between sheets), the effect of temperature increase is reinforced when continuous printing is performed, and therefore an abnormal temperature increase occurs at the edge of the fixing sleeve.
To prevent an abnormal temperature increase, the machine increases an interval between sheets when the paper is fed displaced to one side, and promotes a temperature decrease between sheets.

The machine uses the paper displacement sensor (SR714) located at the right side of the registration shutter in order to detect the paper displacement.
The sensor detects whether the paper width is smaller than the specified paper width or whether the paper is displaced to the left side of the feed path.

Whether the paper width is smaller than the specified paper width or whether the paper is displaced to the right side of the feed path can be detected by the fixing sub thermistor (TH2) because an abnormal temperature increase occurs at the left edge of the fixing sleeve.



F-9-9

Different throughput-down controls are executed depending on the result of detection performed by the paper displacement sensor and fixing sub thermistor.

T-9-5

Paper displacement	The paper is displaced to the left side	The paper width is smaller *1	The paper is not displaced	The paper is displaced to the right side
Paper displacement detection sensor (SR714)	No paper detection is performed		Paper detection is performed	
Fixing sub thermistor (TH2)	Lower than the specified temperature	Higher than the specified temperature	Lower than the specified temperature	Higher than the specified temperature
Throughput-down control	Instantly executed (the lowest value)	Executed step by step	No throughput-down control performed	No throughput-down control performed *2

*1: For the universal-size paper or the paper of which width is smaller than A4-size, an interval between sheets is changed step by step according to the temperature detected by the fixing sub thermistor.
*2: Although throughput-down control is not performed, a restriction is applied to the power supplied to the fixing heater.

Print speed when the throughput down control is executed
When the throughput down control is ON, print speed is switched step by step depending on the paper type or the temperature on the edge of the fixing sleeve etc. Following shows the print speed list in case of the minimum throughput.

T-9-6

Paper		Print speed (ppm)			
Type	Size	1st level	2nd level	3rd level	Last level
Plain paper/Plain paper H/ Recycled paper/Color paper (7/5 speed mono color)	B5R/A5R/EXECR	23.9	4.8	3.6	2.9
Plain paper/Plain paper H/ Recycled paper/Color paper (1/1 speed color, mono color)	B5R/A5R/EXECR	20.2	4.6	3.5	2.9
Heavy paper 1/Heavy paper 2/ Rough paper	B5R/A5R/EXECR	16.1	4.4	3.4	2.8
Transparency	-	3.6	2.4	-	1.8

9.2.6 Feeding Speed Control

imageRUNNER C1022 / imageRUNNER C1022i

The machine switches the paper feeding speed depending on the type of paper fed in order to prevent a fixing failure.
The DC controller switches the paper feeding speed over 4 settings (1/1 speed, 4/5 speed, 1/2 speed, 2/5 speed) depending on the paper type specified by the main controller.

T-9-7

Paper	Grammage	Paper type	Paper feeding speed
Plain paper	60 to 105 g/m2	Plain paper	1/1
Thick paper	105 to 120 g/m2	Thick paper 1	4/5
Thick paper	121 to 176 g/m2	Thick paper 2	4/5
Postcard	up to 190 g/m2	Postcard	1/2
Rough paper	-	Rough	2/5
Label	-	Label	4/5
Envelope	-	Envelope	4/5
Transparency	-	Transparency	2/5

9.2.7 Feeding Speed Control

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine switches the paper feeding speed depending on the type of paper fed in order to prevent a fixing failure.
The DC controller switches the paper feeding speed over 3 settings (1/1 speed, 4/5 speed, 5/7 speed) depending on the paper type specified by the main controller.

T-9-8

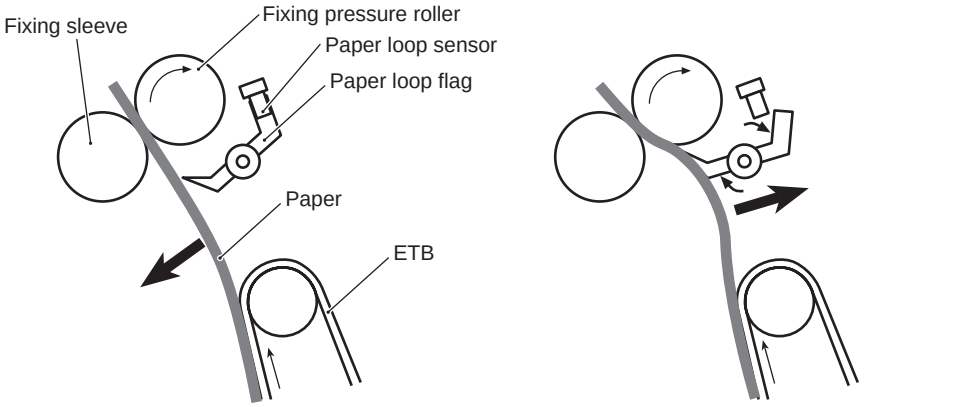
Paper	CL/BW	Paper type	Paper feeding speed	Grammage
Plain paper 1	BW	Light	7/5	60 to 70g/m2
	CL/BW	Light	1/1	
Plain paper 2 (Def)	BW	Normal	7/5	64 to 105g/m2
	CL/BW	Normal	1/1	
Recycled paper	BW	Normal	7/5	64 to 105g/m2
	CL/BW	Normal	1/1	
Color paper	BW	Normal	7/5	64 to 105g/m2
	CL/BW	Normal	1/1	
Heavy paper 1	CL/BW	Heavy1	4/5	106 to 120g/m2
Heavy paper 2	CL/BW	Heavy2	4/5	121 to 163g/m2
Transparency	CL/BW	OHP	4/5	
Label	CL/BW	Label	4/5	
Envelope	CL/BW	Envelope	4/5	
Bond	CL/BW	Rough	4/5	75 to 105g/m2

9.2.8 Warp Control

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

To prevent an image failure, it is necessary to keep the paper warped at an appropriate level between the fixing assembly and the ETB.
When the paper transport speed of the pressure roller is slower than that of the ETB, the paper warp increases, and an image defect or paper crease occurs. Conversely, the speed is faster than that of the ETB, the paper is pulled by the pressure roller, and a color displacement occurs in the sub-scanning direction.

The machine controls the rotational speed of the fixing motor (M1), which drives the pressure roller, to keep an appropriate level of paper warp.
When the paper is warped, the paper loop flag is pressed up, and the paper loop sensor (SR6001) is turned ON. In this case, the DC controller increases the rotational speed of the fixing motor.
When the paper loop sensor is turned OFF, the DC controller determines that the level of paper warp is small and decreases the rotational speed of the fixing motor.



Fixing pressure roller rotational speed is faster than ETB feeding speed.

Fixing pressure roller rotational speed is slower than ETB feeding speed.

F-9-10

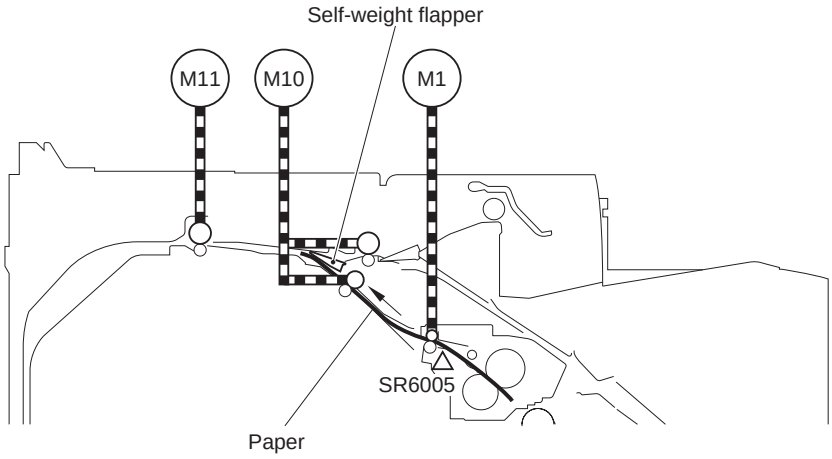
MEMO:
If there are appropriate distance between the transfer unit and the fixing assembly in the product, this control is not necessary to make paper warped.
However, since the machine performs vertical feeding and it is necessary to minimize its height, no distance can be secured between the transfer unit and the fixing assembly. Therefore, it is necessary to perform warp control.

9.2.9 Delivery

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

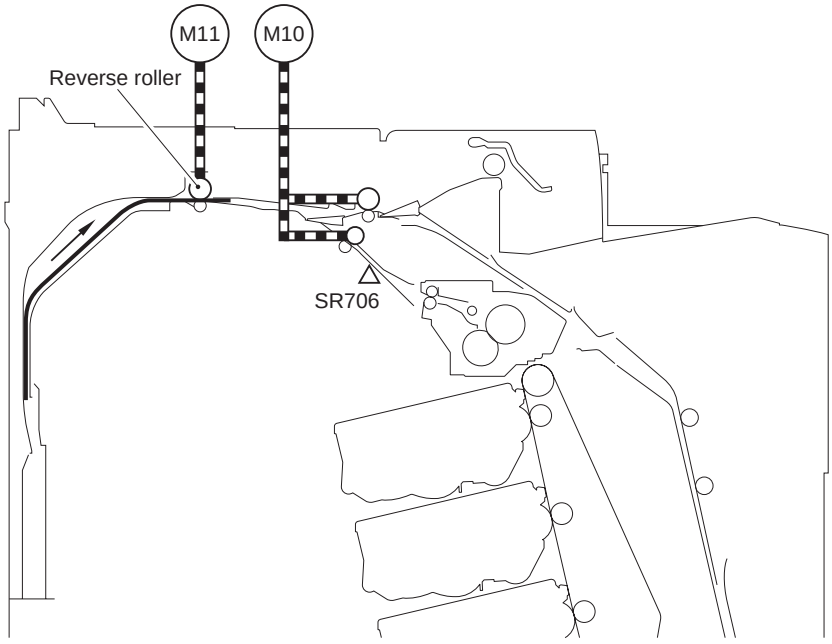
Delivery is a mechanism to deliver the paper transported from the fixing assembly to the delivery tray.
The following sensors detect the paper condition.
- Fixing delivery sensor (SR6005): Detect the paper delivered from the fixing unit.
- Reverse sensor (SR706): Detect the paper transported to the reverse assembly.
- Delivery sensor (SR715): Detect the paper transported to the delivery tray.
- Delivery paper full-level sensor (SR713): Detect the stack volume of paper delivered to the delivery tray.

Delivery operation
1) The fixed paper is delivered from the fixing unit.
2) When a certain period of time elapses after the fixing delivery sensor (SR6005) detects the lead edge of the paper, the duplexing feed motor (M10) and the reverse motor (M11) rotate forward.
   The paper moves to the reverse assembly while pressing up the self-weight flapper.



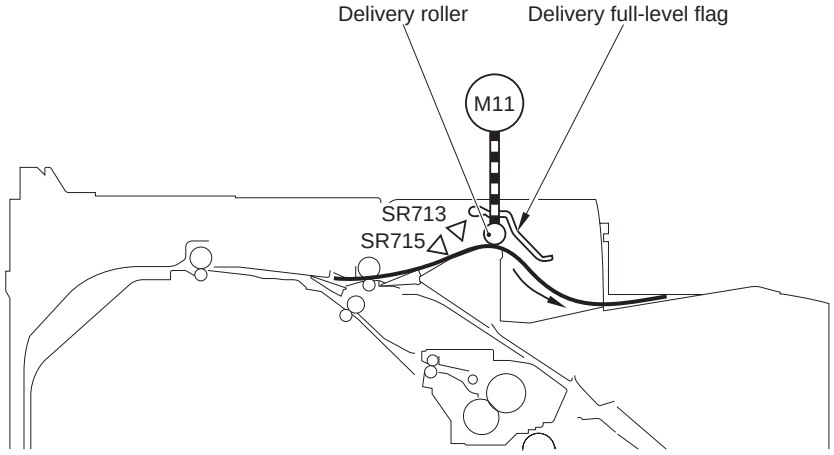
F-9-11

3) When a certain period of time elapses after the reverse sensor (SR706) detects the lead edge of the paper, the reverse motor (M11) stops.
   This certain period of time varies depending on the paper length.
   The paper which passed through the reverse roller before the reverse motor stopped is temporarily stored at the back of the machine.
4) The reverse motor rotates in reverse.
   When the reverse motor rotates in reverse, the paper is transported to the opposite direction.



F-9-12

5) The paper is transported to the delivery tray by the delivery roller.
Since the duplexing/delivery flapper is turned down at this point, the feed path toward the duplexing feed assembly is closed.
Whether or not the paper has been delivered to the delivery tray is detected by the delivery sensor (SR715).
When the paper in the delivery tray reaches the full level, the delivery paper full-level flag comes into contact with the paper, and the full level is detected by the delivery paper full-level sensor (SR713).



F-9-13

9.3 Detection Jams

9.3.1 Jam Detection Outline

9.3.1.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine is provided with several paper sensors at specified positions on the feed path to detect whether the paper exists or whether the paper is transported normally or not.
When the machine determines that a jam has occurred based on the result of detection performed by each sensor, it stops print operation and displays an error message indicating that a jam occurred on the control panel at the same time.

T-9-9

JAM code	JAM type	JAM condition
0104	Pickup delay JAM	If the registration sensor (SR710) cannot detect the leading edge of the paper after 3 times retry within the specified time from turning on of cassette pickup solenoid (SL5012) or manual pickup solenoid (SL5013).
0124	Reverse sensor2 delay JAM	The Reverse Sensor 2 cannot detect the leading edge of paper from the moment the moment reverse starts to the moment the jam detection time is reached.
0208	Pickup stationary JAM	If the registration sensor (SR710) cannot detect the trailing edge of paper within approx. 3.2 sec after it detects the leading edge of paper.
010c	Delivery delay JAM	If the fixing delivery sensor (SR6005) cannot detect the leading edge of paper within approx. 3.0 sec after the registration sensor (SR710) detects the leading edge of paper.
0210	Delivery stationary JAM	If the fixing delivery sensor (SR6005) continues to detect the paper after the theoretical time plus time for feeding paper by 45 mm (approx. 3.1 sec) elapsed after the registration sensor (SR710) detects the leading edge of paper.
0214	Residual JAM	If any of the registration sensor (SR710), paper loop sensor (SR6001), fixing delivery sensor (SR6005) or reverse sensor (SR706) detects the paper during initial sequence.
1118	Door open JAM	If the front cover sensor (SR720) detects that the front door is open during the paper feeding.
0221	Reverse assembly JAM	If the paper length that is detected by the reverse sensor (SR706) is approx. 50 mm or more longer than the paper length that is detected by the delivery sensor (SR715). (When the double-fed paper drops on the back of the machine.)
0228	Duplexing re-pickup assembly JAM	The machine determines the reverse re-pickup jam if the registration sensor (SR710) cannot detect the presence of paper within the specified time* after the duplexing pickup starts.

*: Specified time differs depending on the feed speed.
1/1 speed: approx. 2.0 sec
4/5 speed: approx. 2.5 sec
1/2 speed: approx. 4.0 sec

9.3.2 Delay Jams

9.3.2.1 Pickup Delay JAM

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine performs the retry control, which executes the pickup operation up to three times, in order to retrieve the pickup delay jam caused by the pickup failure.
The machine determines that the pickup delay jam has occurred when the registration sensor (SR710) cannot detect the lead edge of the paper within a specified period of time after the cassette pickup solenoid (SL5012) or manual feed pickup solenoid (SL5013) is turned ON for the third pickup operation.

T-9-10

	Cassette	Manual feed tray
Time	Approx. 1.3 sec	Approx. 2.2 sec

9.3.2.2 Delivery Delay JAM

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine determines that the delivery delay jam has occurred when the fixing delivery sensor (SR6005) cannot detect the lead edge of the paper even when approximately 3.0 seconds elapsed after the registration sensor (SR710) detected the lead edge of the paper.

9.3.2.3 Duplexing Pickup Delay JAM

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine determines that the duplexing pickup delay jam has occurred when the lead edge of the paper does not reach the registration sensor (SR710) within approximately 2.0 seconds after the duplexing feed motor (M10) started feeding the paper placed in standby at the duplexing re-pickup position.

9.3.2.4 Duplexing Reverse Unit Delay JAM

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine determines that the duplexing reverse unit delay jam has occurred when the reverse sensor (SR706) does not detect the absence of paper in the period from the start of duplexing reverse to the detection of the duplexing pickup delay jam.

9.3.3 Stationary Jams

9.3.3.1 Pickup Stationary JAM

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine determines that the pickup stationary jam has occurred when the registration sensor (SR710) cannot detect the trailing edge of the paper even when approximately 3.2 seconds elapsed after it detected the lead edge of the paper.

9.3.3.2 Delivery Stationary JAM

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine detects the delivery stationary jam after determining that the wrapping jam did not occur.
The machine determines that the delivery stationary jam has occurred when the fixing delivery sensor (SR6005) detects the presence of paper even when the time equivalent to theoretical time plus 45 mm (approximately 3.1 seconds) after the registration sensor (SR710) detects the trailing edge of the paper.

9.3.4 Other Jams

9.3.4.1 Wrapping JAM

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine detects the wrapping jam after determining that the delivery delay jam did not occur.
The machine determines that the wrapping jam has occurred when the fixing delivery sensor (SR6005) detects the absence of paper before the time equivalent to the paper length detected by the registration sensor (SR710) minus 50 mm (approximately 1.9 seconds) elapses after the sensor detects the lead edge of the paper.

9.3.4.2 Residual JAM

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine determines that the residual jam has occurred when any of the registration sensor (SR710), paper loop sensor (SR6001), fixing delivery sensor (SR6005), or reverse sensor (SR706) detects the paper at the initial sequence.

9.3.4.3 Door Open JAM

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine determines that the door open jam has occurred when the front cover sensor (SR720) detects that the front cover is opened during paper feeding.

9.3.4.4 Automatic Delivery Function

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

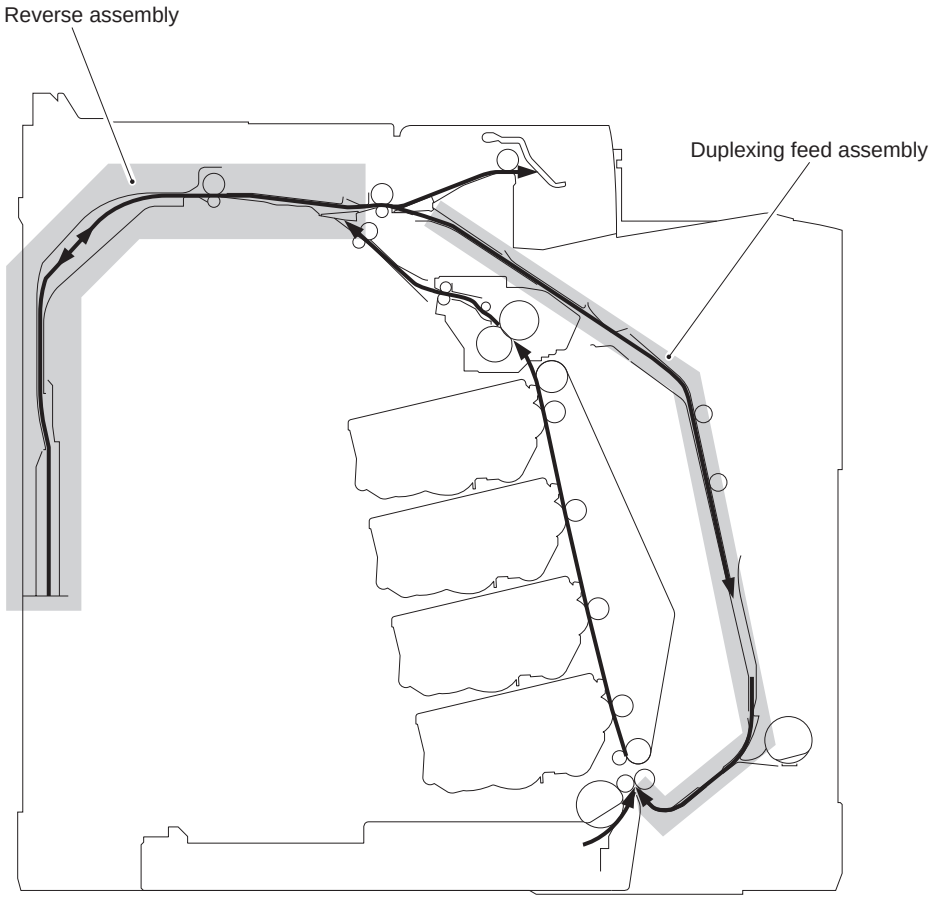
When the registration sensor (SR710) detects the presence of paper after detecting the absence of paper at the initial sequence after the power was turned on or the front cover was closed, the machine drives the motors and solenoids in the feeding system and delivers the residual paper automatically.

9.4 Duplex Feeding

9.4.1 Overview

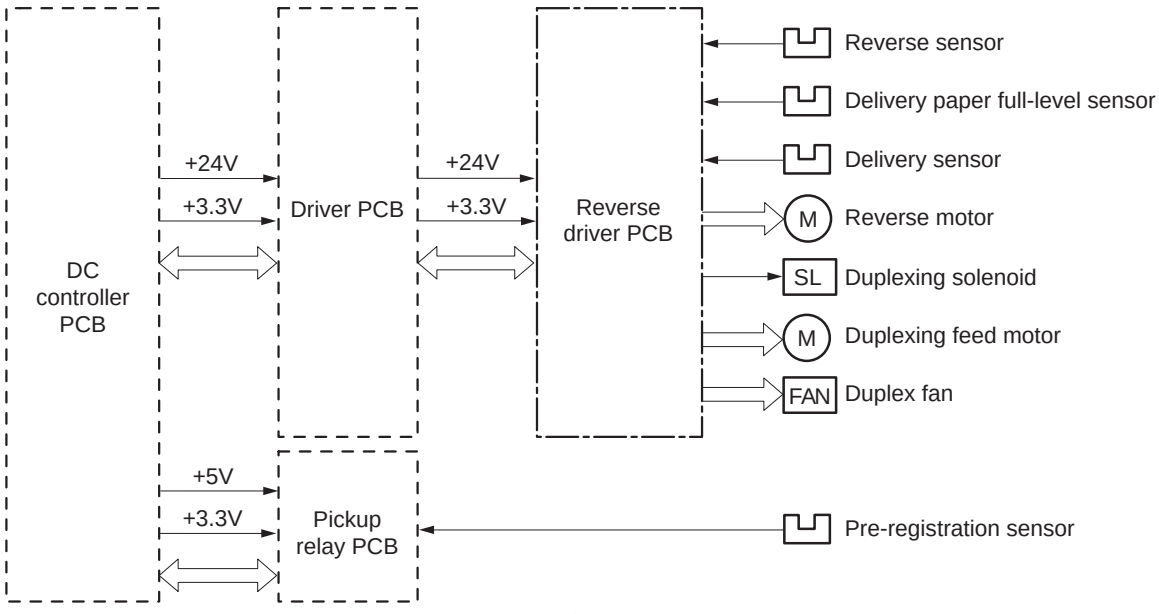
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The paper fed from the fixing assembly to the reverse unit is sent to the reverse assembly.
When delivery is performed, the paper is transported to the delivery tray. When duplexing printing is performed, the paper is sent to the duplexing feed assembly where transfer and fixing are performed for the second side.
The duplexing feed assembly corrects paper skew and the position to start writing an image in the main scanning direction for the second side.



F-9-14

The reverse driver PCB controls the operational sequence of the reverse assembly and duplexing feed assembly using an 8-bit CPU (IC801).
The reverse driver PCB performs serial communication with the DC controller. It drives each load according to the signal sent from the DC controller.

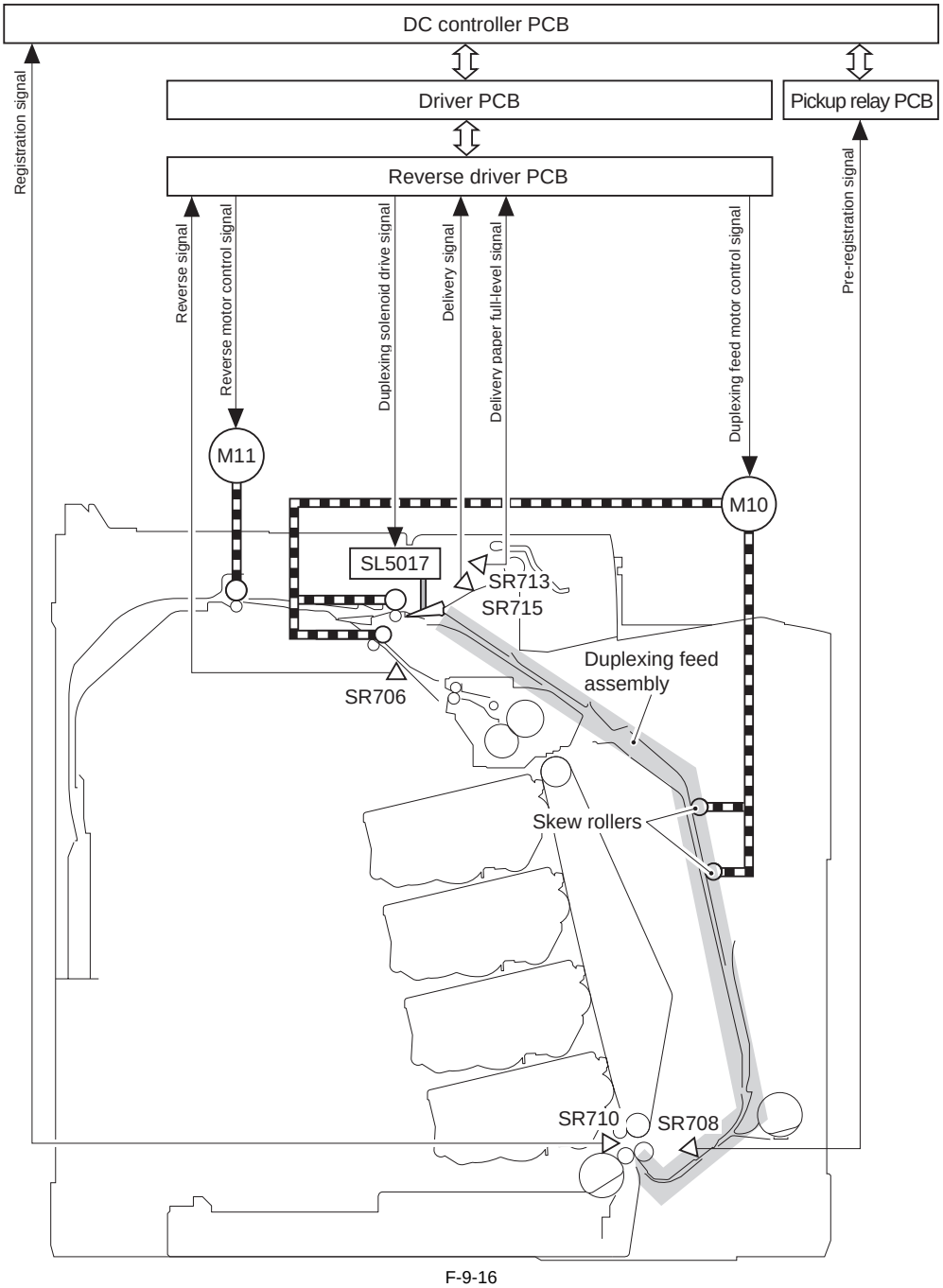


F-9-15

9.4.2 Duplexing Feed Control

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

In duplexing printing, the machine reverses the paper printed on the first side and again transports it to the pickup position to print the second side.
Paper reverse is driven by the reverse motor (M11) and duplexing solenoid (SL5017).
The duplexing feed assembly feeds the paper by rotating two skew rollers by the duplexing feed motor (M10).
When the registration sensor (SR710) detects the lead edge of the paper, it sends a signal to the DC controller. The reverse driver PCB detects whether the paper has been transported to the pickup position or not by monitoring the signal.

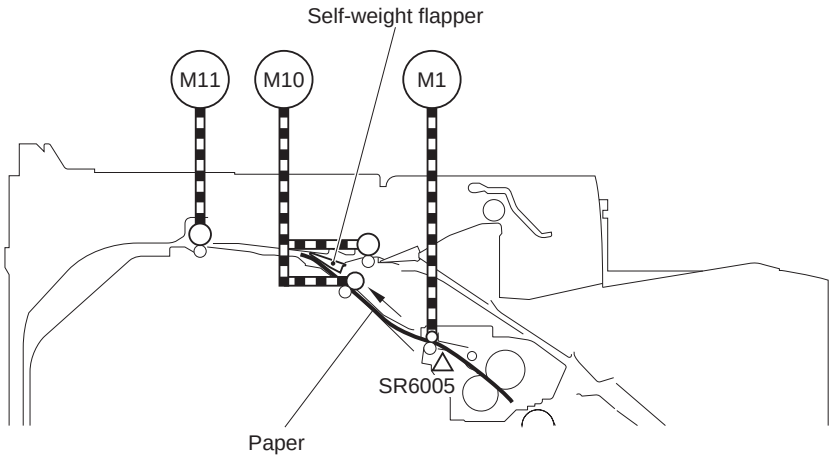


F-9-16

M10:	Duplexing feed motor	SR708:	Pre-registration sensor
M11:	Reverse motor	SR710:	Registration sensor
SL5017:	Duplexing solenoid	SR713:	Delivery paper full-level sensor
SR706:	Reverse sensor	SR715:	Delivery sensor

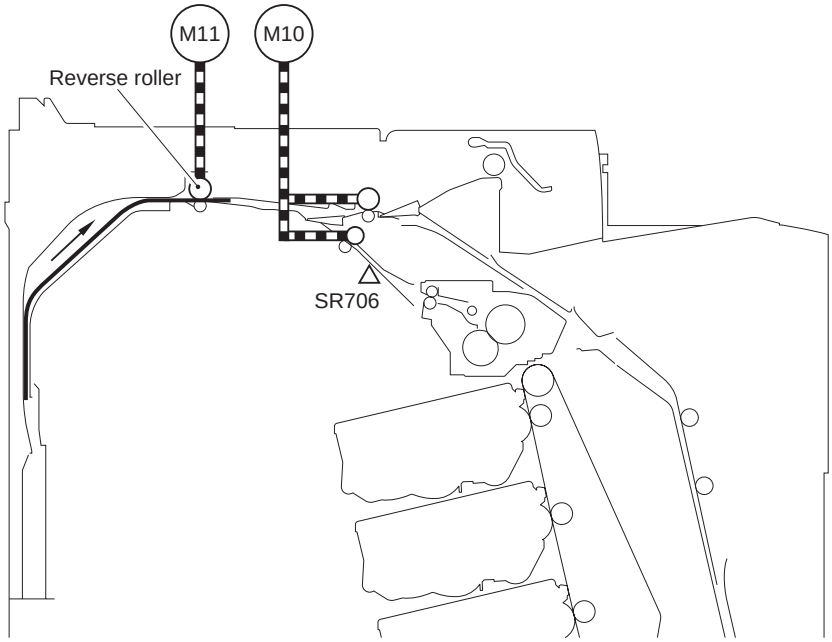
Duplexing feed sequence

1) The feed roller driven by the fixing motor (M1) delivers the paper in which fixing was performed on the first side from the fixing unit.
2) When a specified period of time elapses after the fixing delivery sensor (SR6005) detects the lead edge of the paper, the duplexing feed motor (M10) and the reverse motor (M11) rotate forward.
   The paper moves to the reverse assembly while pressing up the self-weight flapper.



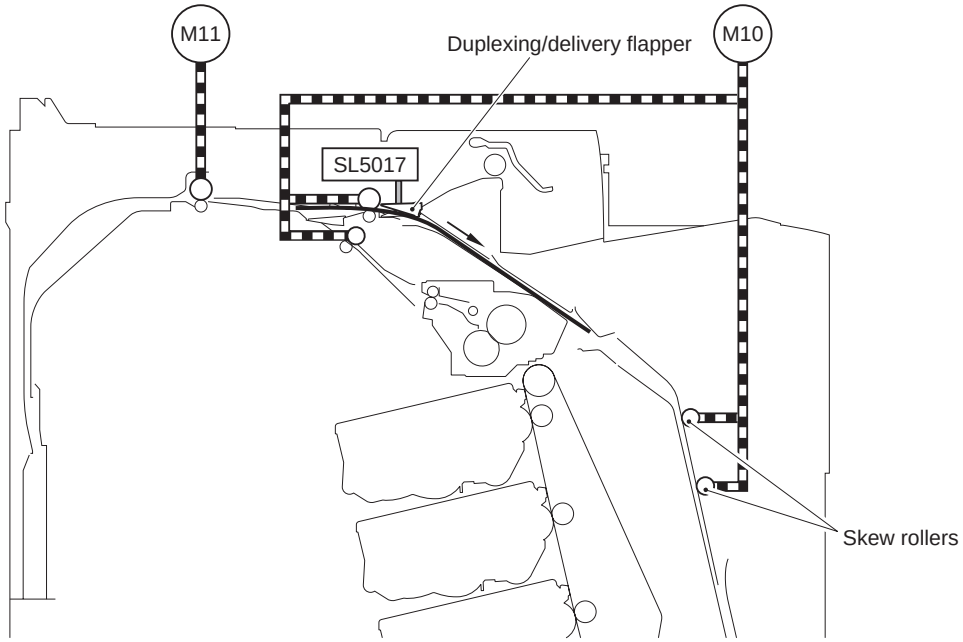
F-9-17

3) When a specified period of time elapses after the reverse sensor (SR706) detects the lead edge of the paper, the reverse motor (M11) stops.
   This specified period of time varies depending on the paper length.
   The paper which passed through the reverse roller before the reverse motor stops is temporarily stored at the back of the machine.
4) The reverse motor rotates in reverse.
   When the reverse motor rotates in reverse, the paper is transported to the opposite direction.



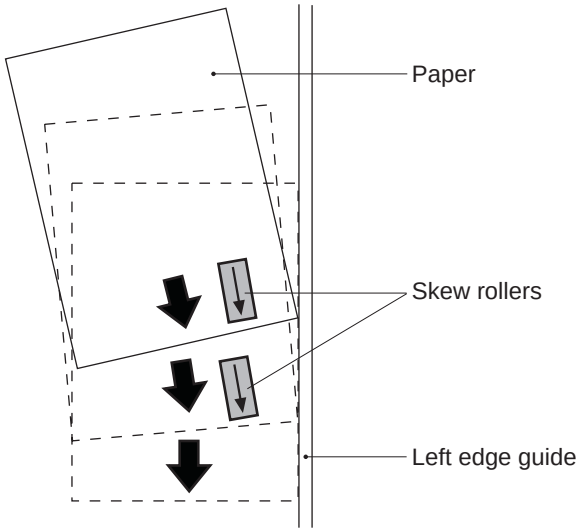
F-9-18

5) When a specified period of time elapses after the reverse motor rotates in reverse, the duplexing solenoid (SL5017) is turned ON.
When the duplexing/delivery flapper moves up, the feed path toward the duplexing feed assembly is secured. The paper is transported through the duplexing feed assembly.



F-9-19

6) The paper is transported while being pressed to the left edge guide when it is transported by the skew roller of the duplexing feed assembly.
During this operation, the paper skew and horizontal registration of the second side is corrected.



F-9-20

7) When a specified period of time elapses after the pre-registration sensor (SR708) detects the lead edge of the paper, the duplexing feed motor stops.
This specified period of time varies depending on the paper length.
The paper stops at the re-pickup position.
8) The main controller sends the print command for the second side to the DC controller.
9) The DC controller drives the pickup motor (M4) at the timing when duplexing re-pickup can be performed.
The paper skew is corrected by the registration shutter, and the paper is transported to the ETB unit.
10) After the above-mentioned procedures, the machine delivers the paper to the delivery tray, following the procedure of delivery operation.
In this condition, the duplexing/delivery flapper is turned down, so the feed path toward the duplexing feed assembly is closed.

9.4.3 Duplexing Pickup Operation

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine performs three types of duplexing printing operation depending on the paper size and printing mode.
- Single sheet mode: Duplexing print operation of a sheet at one by one
- Dual sheet mode: Duplexing print operation of two sheets at once
- Alternating complex mode: Duplexing print operation in the condition where three sheets remain in the machine

T-9-11

Paper size	Duplexing print operation
A4/LTR	Single sheet mode Dual sheet mode Alternating complex mode
Legal	Single sheet mode

Each duplexing print operation can be specified by the main controller.
However, duplexing print operation cannot be specified for the cases other than the printable paper size (A4, LTR, and legal) and the specified print mode (Plain paper, Thick paper 1, Gloss paper 1) for duplexing printing.

9.5 Parts Replacement Procedure

9.5.1 Pickup Feed Unit

9.5.1.1 Before Removing the Pickup Feed Unit

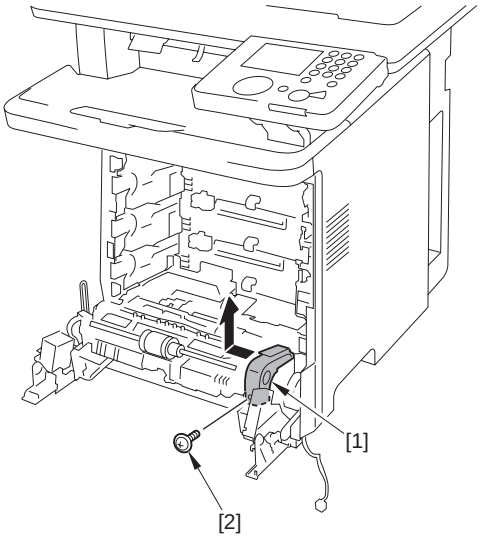
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
3) Remove the left cover.(page 11-14) Reference [Removing the Left Cover]
4) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]
5) Remove the Front Cover Unit.(page 11-10) Reference [Removing the Front Cover Unit]
6) Remove the Toner Cartridge.

9.5.1.2 Removing the Pickup Feed Unit

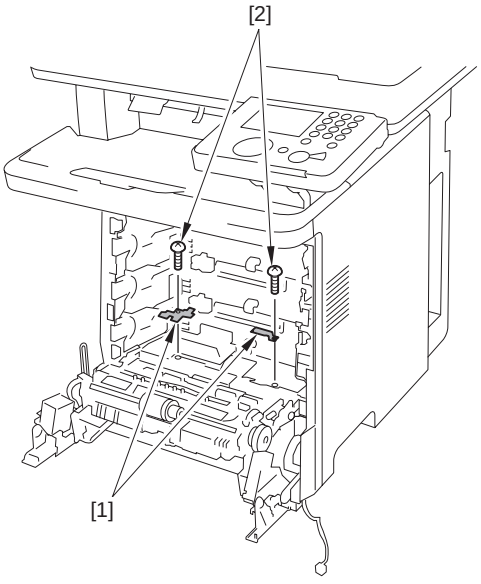
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the cover [1].
- 1 screw [2]



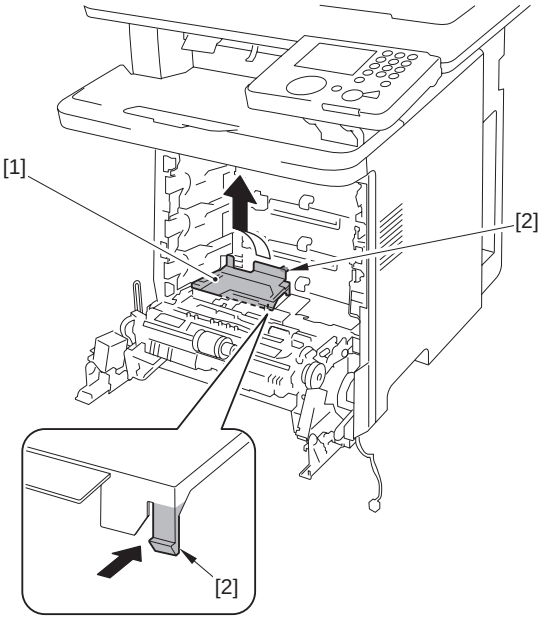
F-9-21

2) Remove the 2 plates [1]
- 2 screws [2]



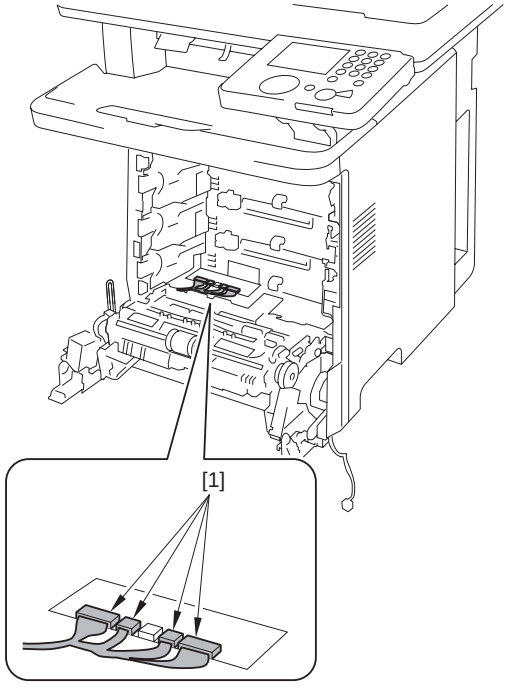
F-9-22

3) Remove the PCB cover [1]
- 2 claws [2]



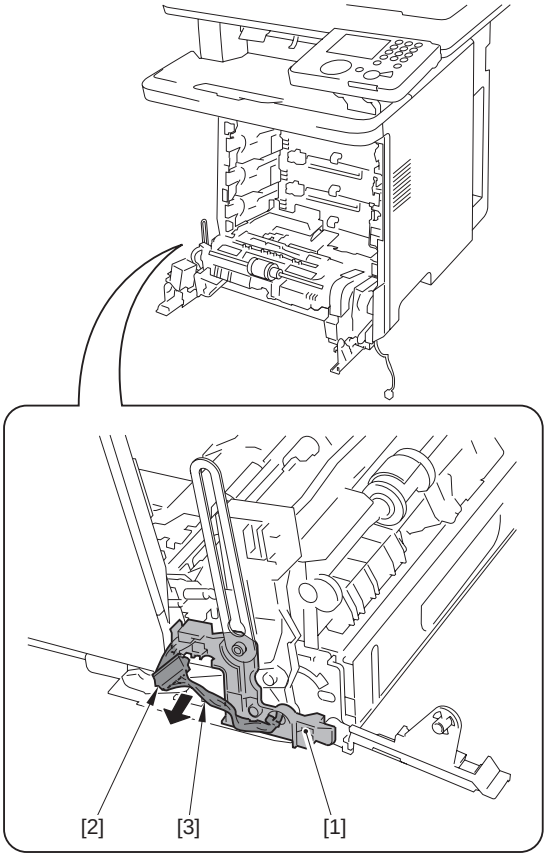
F-9-23

4) Disconnect the 4 connectors [1].



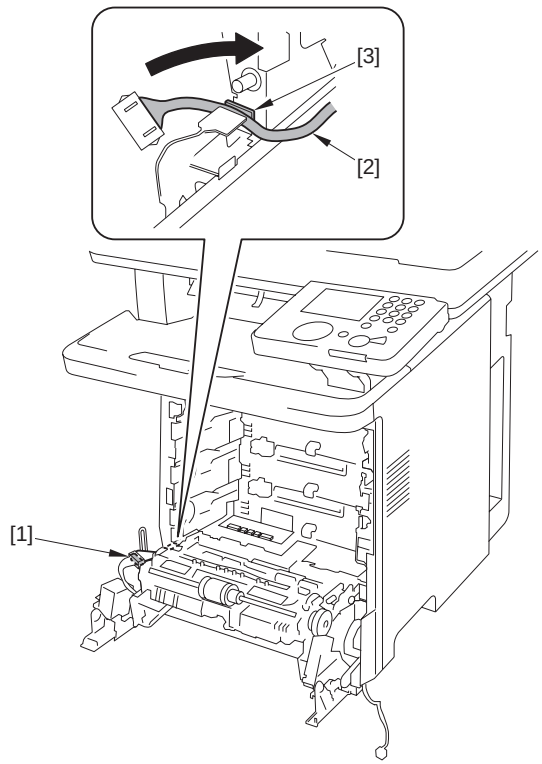
F-9-24

5) Remove the relay connector [2] and the harness [3] from the harness guide [1].



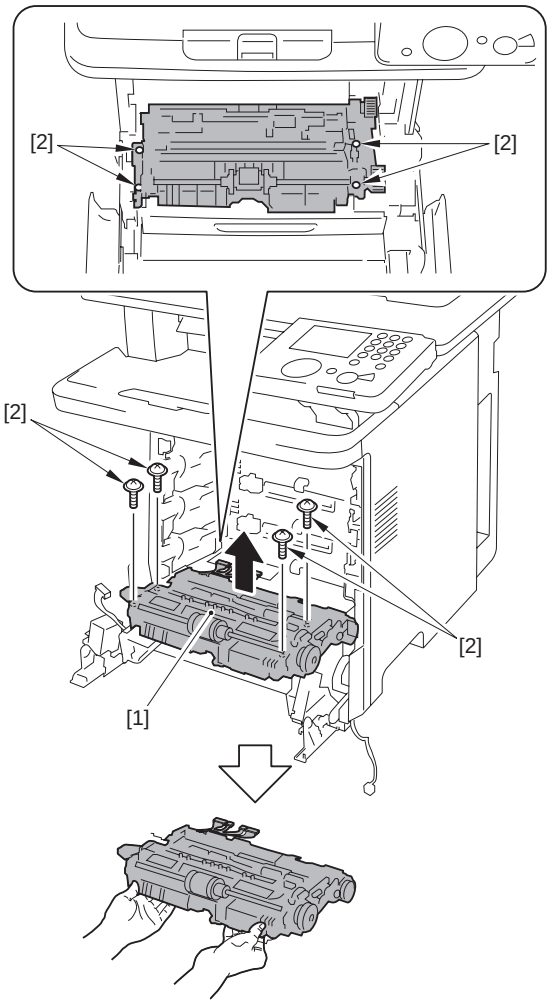
F-9-25

6) Disconnect the connector [1] and free the harness [2] from the harness guide [3].



F-9-26

7) Remove the pickup feed unit [1].
- 4 screws [2]



F-9-27

9.5.2 Cassette Pickup Roller

9.5.2.1 Before Removing the Cassette Pickup Roller

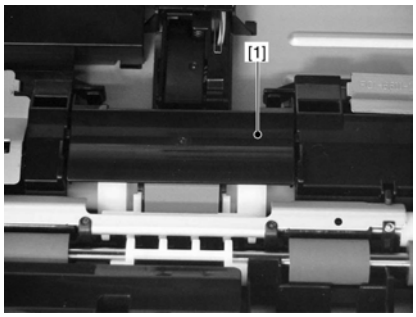
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]

9.5.2.2 Removing the Cassette Pickup Roller

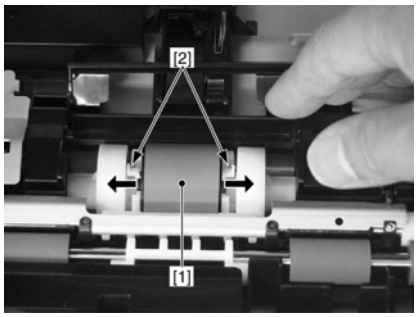
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Open the cover [1].



F-9-28

2) Remove the cassette pickup roller [1].
- 2 claws [2]



F-9-29

9.5.3 Pickup Motor

9.5.3.1 Before Removing the Pickup Motor

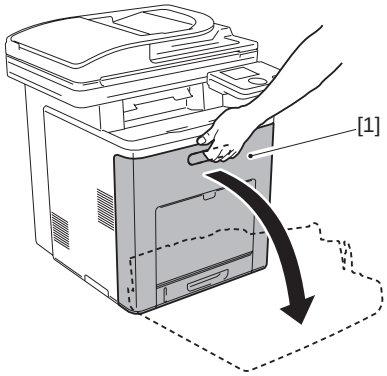
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12)Reference [Removing the Rear Cover Unit]
3) Remove the right cover.(page 11-12)Reference [Removing the Right Cover]

9.5.3.2 Removing the Pickup Motor

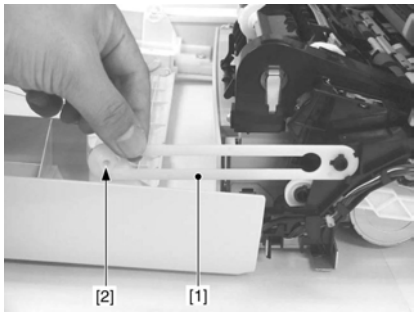
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Open the front cover [1].



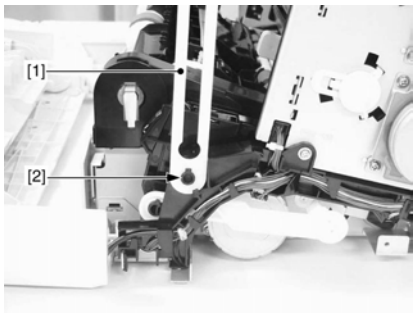
F-9-30

2) Remove the link [1] from the shaft [2].



F-9-31

3) Fit the link [1] with the cutoff of the shaft [2] to remove the link.

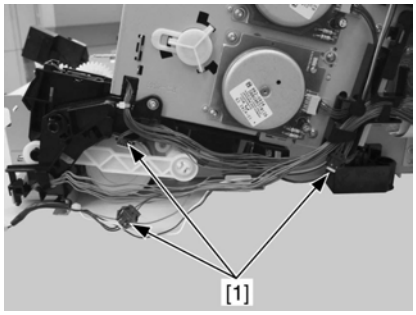


F-9-32

4) Free the cable from the cable guide [1].

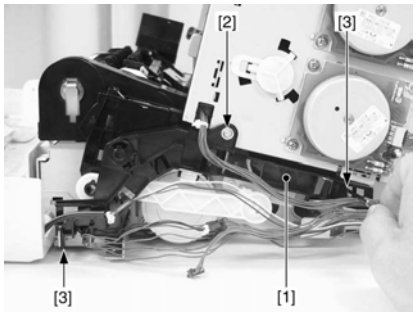
F-9-33

5) Disconnect the 3 connectors [1].



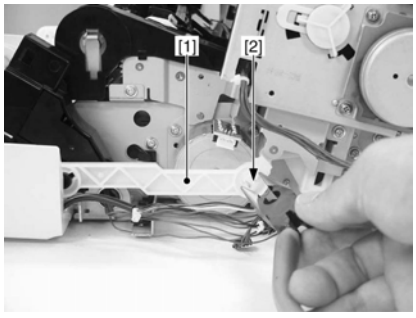
F-9-34

6) Remove the cable guide [1].
- 1 screw [2]
- 2 claws [3]



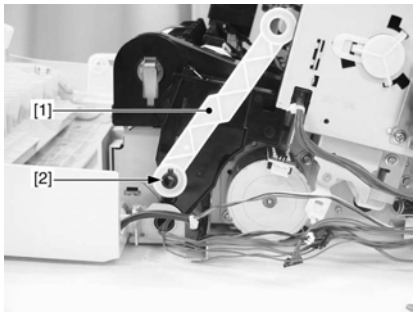
F-9-35

7) Remove the rod [1].
- 1 claw [2]



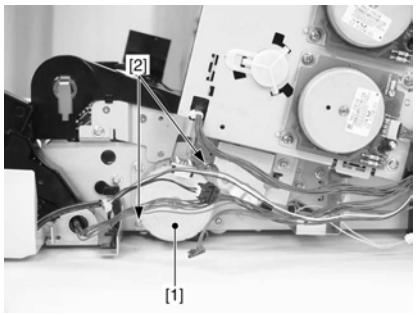
F-9-36

8) Fit the rod [1] with the cutoff of the shaft [2] to remove the rod.



F-9-37

9) Remove the pickup motor [1].
- 2 screws [2]



F-9-38

9.5.4 Cassette Pickup Solenoid

9.5.4.1 Before Removing the Cassette Pickup Solenoid

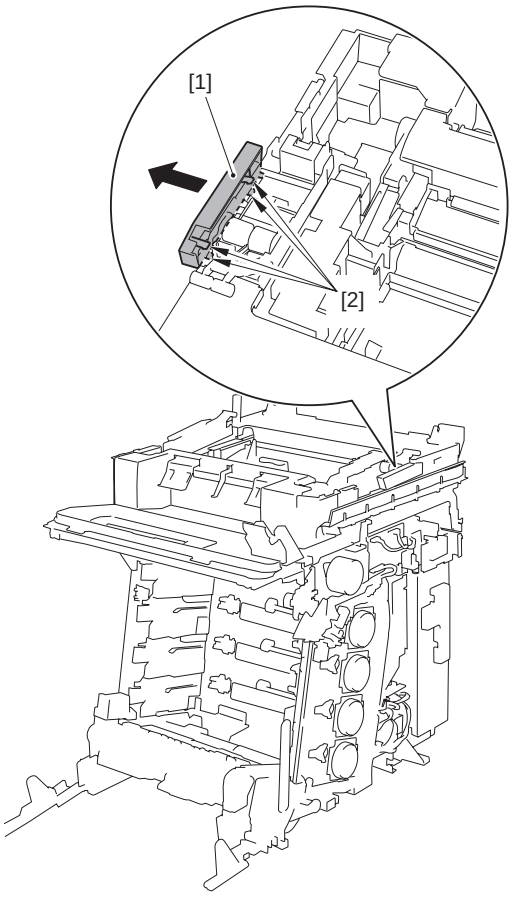
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the fixing assembly.(page 10-8) Reference [Removing the Fixing Assembly]
3) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
4) Remove the ADF Unit + Reader Unit.(page 5-9) Reference [Removing the ADF Unit + Reader Unit]
5) Remove the left cover.(page 11-14) Reference [Removing the Left Cover]
6) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]
7) Remove the Control Panel Unit.(page 11-22) Reference [Removing the Control Panel Unit]
8) Remove the Front Upper Cover 1.(page 11-11) Reference [Removing Front Upper Cover 1]
9) Remove the Front Cover Unit.(page 11-10) Reference [Removing the Front Cover Unit]
10) Remove the Pickup Feed Unit.(page 9-21) Reference [Removing the Pickup Feed Unit]

9.5.4.2 Removing the Cassette Pickup Solenoid

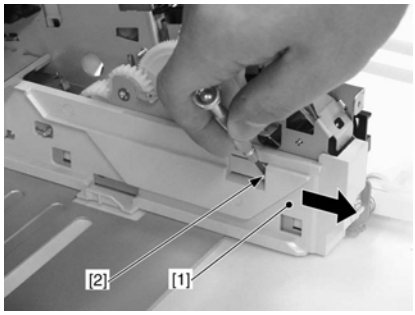
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the right arm cover [1].
- 4 claws [2]



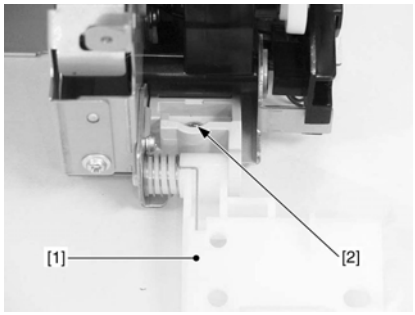
F-9-39

2) Remove the cassette guide [1].
- 1 claw [2]



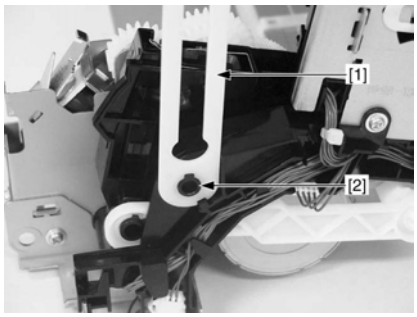
F-9-40

3) Remove the right hinge [1].
- 1 screw [2]



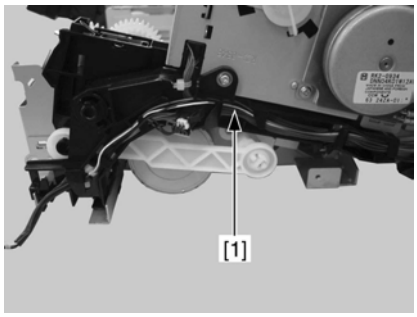
F-9-41

4) Fit the link [1] with the cutoff of the shaft [2] to remove the link.



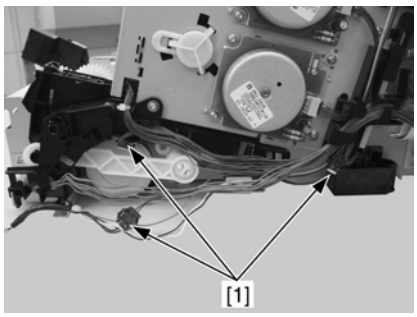
F-9-42

5) Free the cable from the cable guide [1].



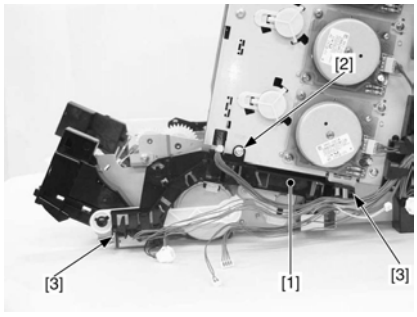
F-9-43

6) Disconnect the 3 connectors [1].



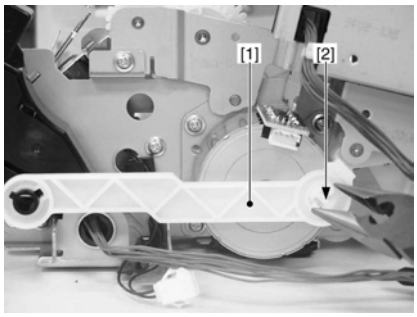
F-9-44

7) Remove the cable guide [1].
- 1 screw [2]
- 2 claws [3]



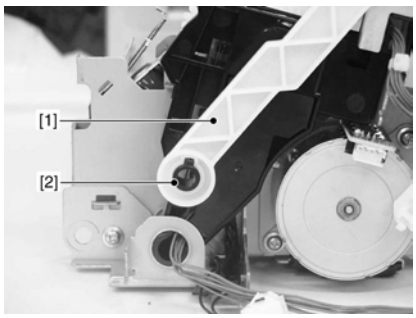
F-9-45

8) Remove the rod [1].
- 1 claw [2]



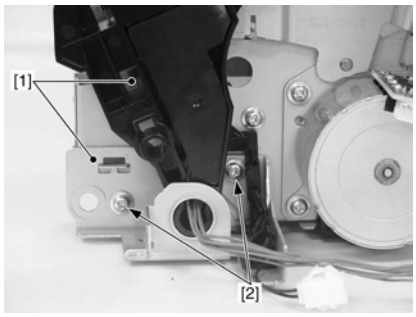
F-9-46

9) Fit the rod [1] with the cutoff of the shaft [2] to remove the rod.



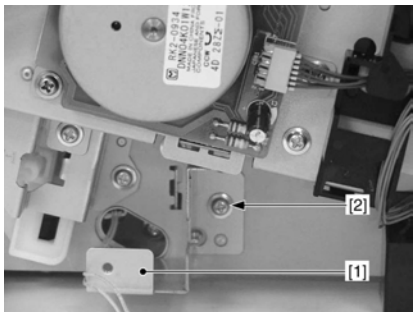
F-9-47

10) Remove the holder [1].
- 2 screws [2]



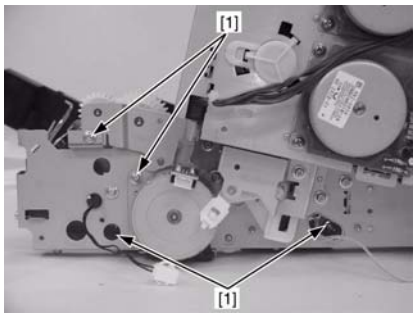
F-9-48

11) Remove the plate [1].
- 1 screw [2]



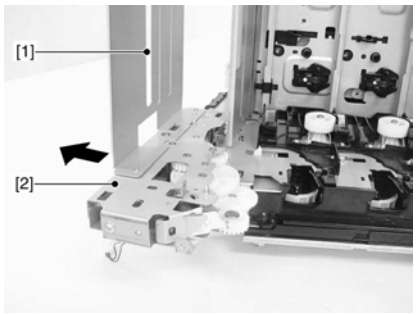
F-9-49

12) Remove the 4 screws [1]



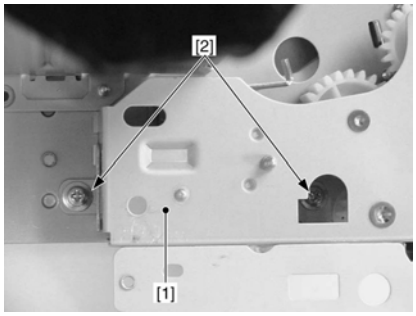
F-9-50

13) Put the right side of the host machine downward to slide the bottom plate [1] for about 30mm from the pickup drive unit [2].



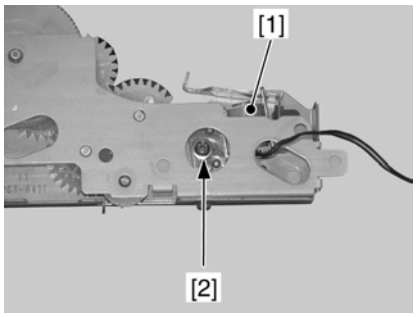
F-9-51

14) Remove the pickup drive unit [1].
- 2 screws [2]



F-9-52

15) Remove the cassette pickup solenoid [1].
- 1 screw [2]



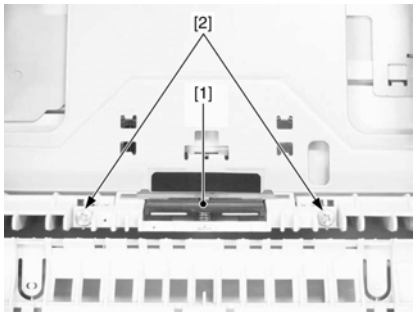
F-9-53

9.5.5 Cassette Separation Pad

9.5.5.1 Removing the Cassette Separation Pad

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the cassette.
2) Remove the cassette separation pad [1].
- 2 screws [2]



F-9-54

9.5.6 Manual Pickup Roller

9.5.6.1 Before Removing the Manual Feed Pickup Roller

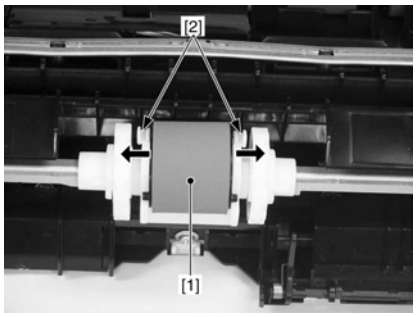
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]

9.5.6.2 Removing the Manual Feed Pickup Roller

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the manual feed pickup roller [1].
- 2 claws [2]



F-9-55

9.5.7 Manual Pickup Solenoid

9.5.7.1 Before Removing the Manual Feed Pickup Solenoid

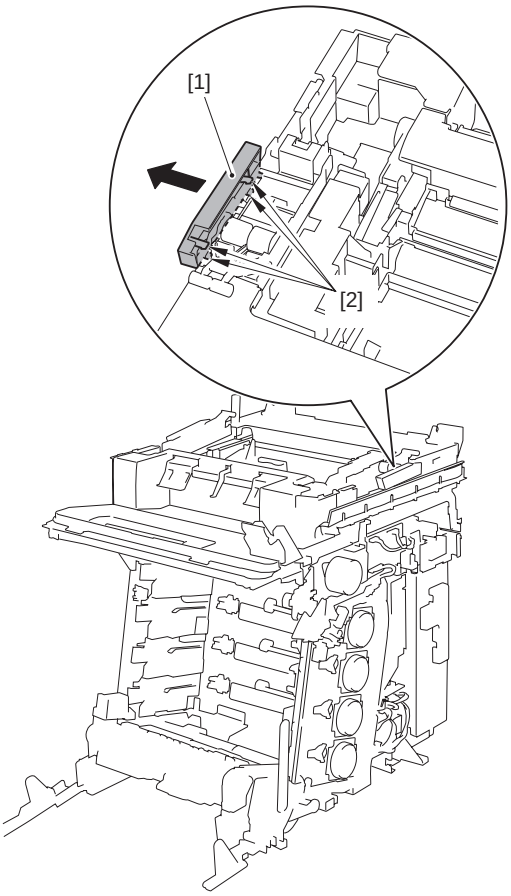
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]
2) Remove the fixing assembly.(page 10-8)Reference [Removing the Fixing Assembly]
3) Remove the rear cover unit.(page 11-12)Reference [Removing the Rear Cover Unit]
4) Remove the ADF Unit + Reader Unit.(page 5-9)Reference [Removing the ADF Unit + Reader Unit]
5) Remove the left cover.(page 11-14)Reference [Removing the Left Cover]
6) Remove the right cover.(page 11-12)Reference [Removing the Right Cover]
7) Remove the Control Panel Unit.(page 11-22)Reference [Removing the Control Panel Unit]
8) Remove the Front Upper Cover 1.(page 11-11)Reference [Removing Front Upper Cover 1]
9) Remove the Front Cover Unit.(page 11-10)Reference [Removing the Front Cover Unit]
10) Remove the Pickup Feed Unit.(page 9-21)Reference [Removing the Pickup Feed Unit]

9.5.7.2 Removing the Manual Feed Pickup Solenoid

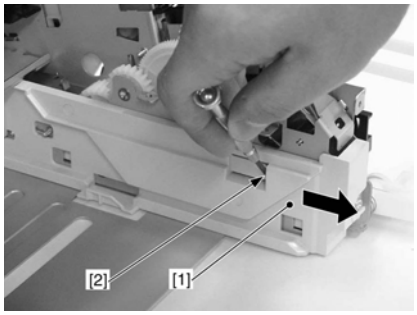
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the right arm cover [1].
- 4 claws [2]



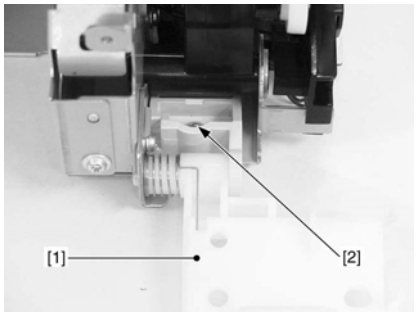
F-9-56

2) Remove the cassette guide [1].
- 1 claw [2]



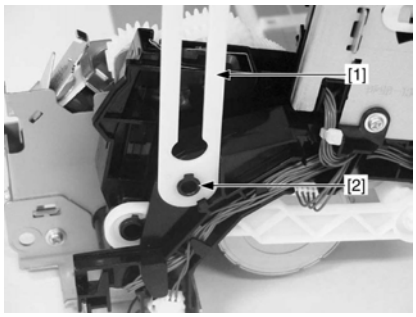
F-9-57

3) Remove the right hinge [1].
- 1 screw [2]



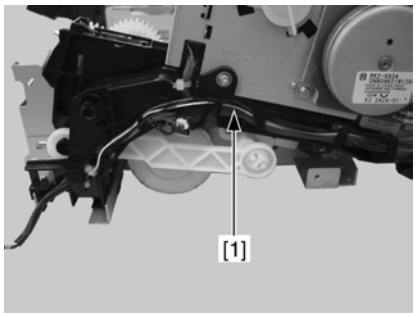
F-9-58

4) Fit the link [1] with the cutoff of the shaft [2] to remove the link.



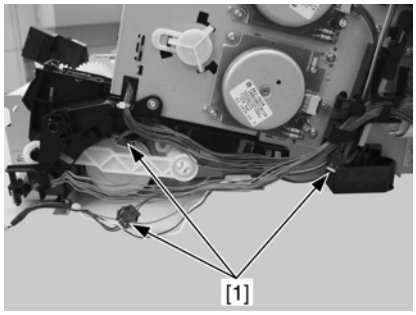
F-9-59

5) Free the cable from the cable guide [1].



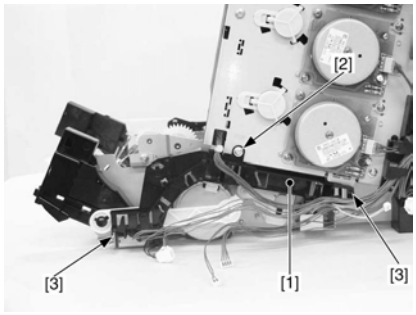
F-9-60

6) Disconnect the 3 connectors [1].



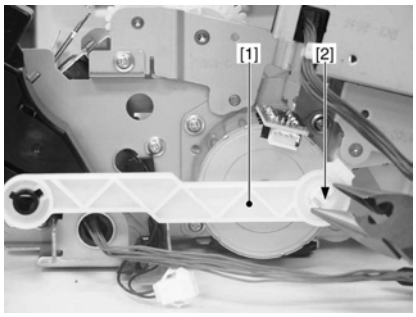
F-9-61

7) Remove the cable guide [1].
- 1 screw [2]
- 2 claws [3]



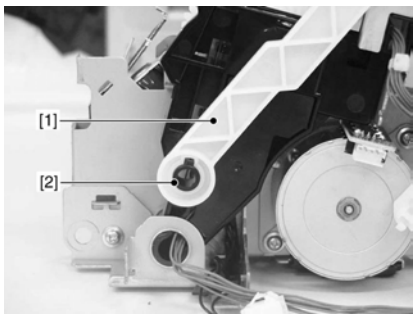
F-9-62

8) Remove the rod [1].
- 1 claw [2]



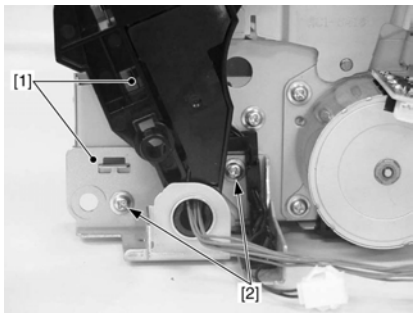
F-9-63

9) Fit the rod [1] with the cutoff of the shaft [2] to remove the rod.



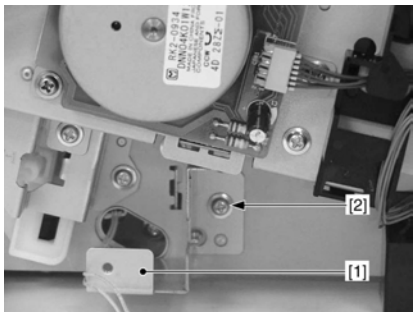
F-9-64

10) Remove the holder [1].
- 2 screws [2]



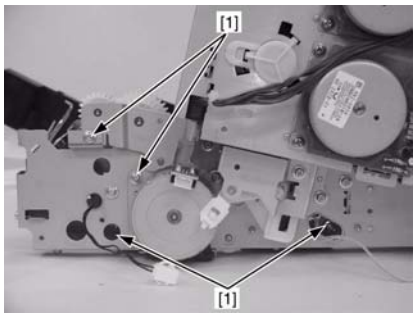
F-9-65

11) Remove the plate [1].
- 1 screw [2]



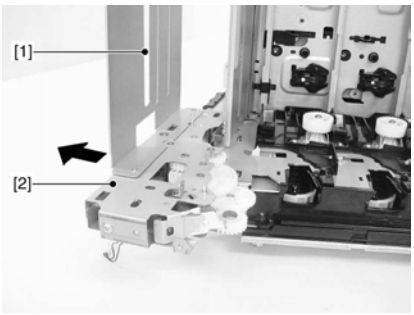
F-9-66

12) Remove the 4 screws [1]



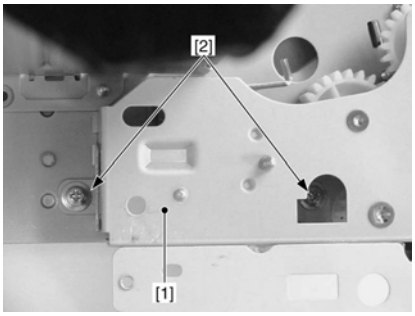
F-9-67

13) Put the right side of the host machine downward to slide the bottom plate [1] for about 30mm from the pickup drive unit [2].



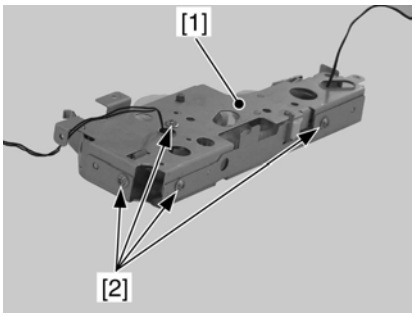
F-9-68

14) Remove the pickup drive unit [1].
- 2 screws [2]



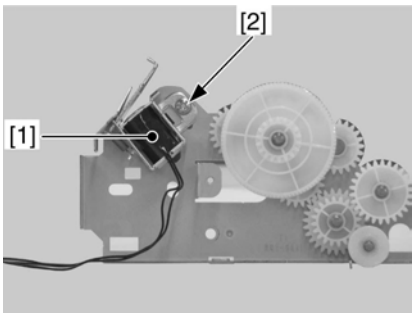
F-9-69

15) Remove the plate [1].
- 4 screws [2]



F-9-70

16) Remove the manual feed pickup solenoid [1].
- 1 screw [2]



F-9-71

9.5.8 Manual Separation Roller

9.5.8.1 Before Removing the Manual Feed Separation Pad

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

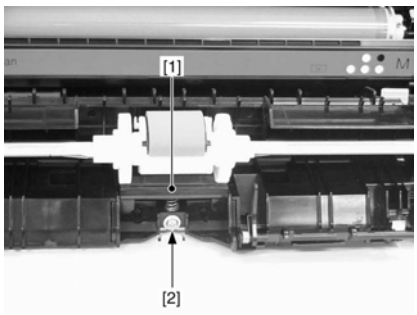
1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]

9.5.8.2 Removing the Manual Feed Separation Pad

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the cassette.
2) Remove the manual feed separation pad [1].

- 1 screw [2]



F-9-72

9.5.9 Duplexing Feed Motor

9.5.9.1 Before Removing the Duplex Feed Motor

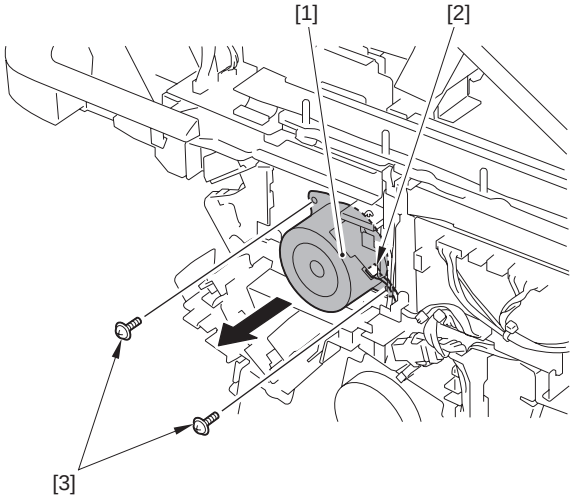
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
3) Remove the ADF Unit + Reader Unit.(page 5-9) Reference [Removing the ADF Unit + Reader Unit]
4) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]

9.5.9.2 Removing the Duplex Feed Motor

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the duplex feed motor [1].
- 1 connector [2]
- 2 screws [3]



F-9-73

9.5.10 Reverse Unit

9.5.10.1 Before Removing the Reversal Unit

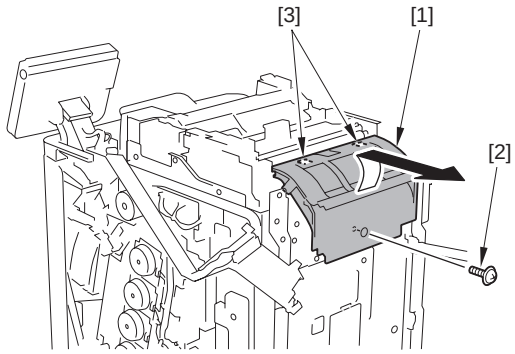
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the fixing assembly.(page 10-8) Reference [Removing the Fixing Assembly]
3) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
4) Remove the ADF Unit + Reader Unit.(page 5-9) Reference [Removing the ADF Unit + Reader Unit]
5) Remove the left cover.(page 11-14) Reference [Removing the Left Cover]
6) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]
7) Remove the Upper Frame Unit.(page 11-20) Reference [Removing the Upper Frame Unit]

9.5.10.2 Removing the Reversal Unit

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

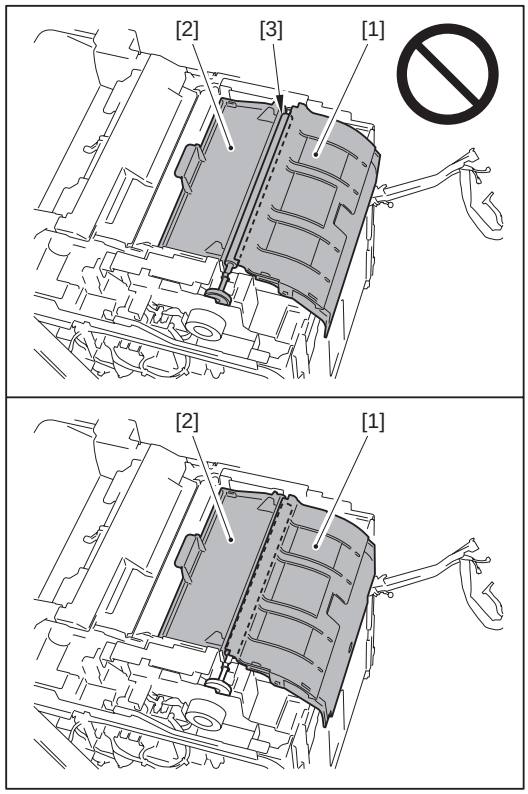
1) Remove the reversal guide [1].
- 1 screw [2]
- 2 claws [3]



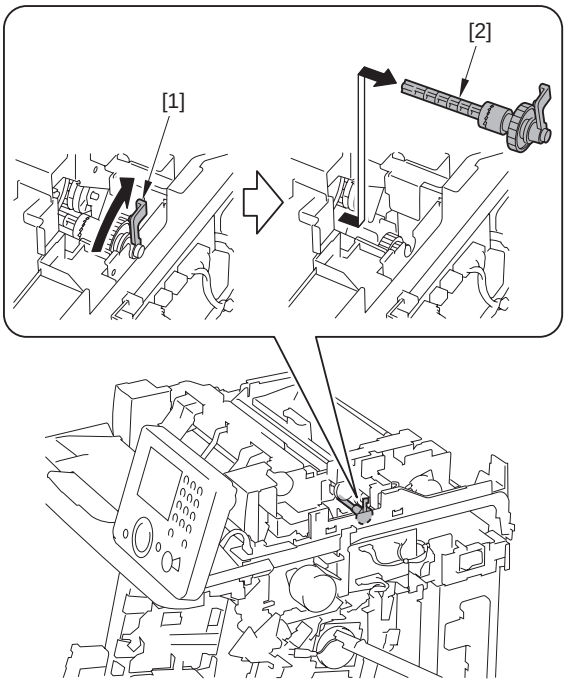
F-9-74

Points to Note At Installation
Unless the reverse guide is installed correctly, a jam may occur.
Make sure that the reverse guide is installed in the host machine correctly, following the procedure indicated below.
If it is not installed correctly, uninstall it and then install it again.

- When not installed correctly
The reverse roller surface [3] is visible in a gap between the reverse guide [1] and the cover [2] of the reverse unit.
- When installed correctly
The roller surface [3] is hidden by the reverse guide [1] and is not visible.

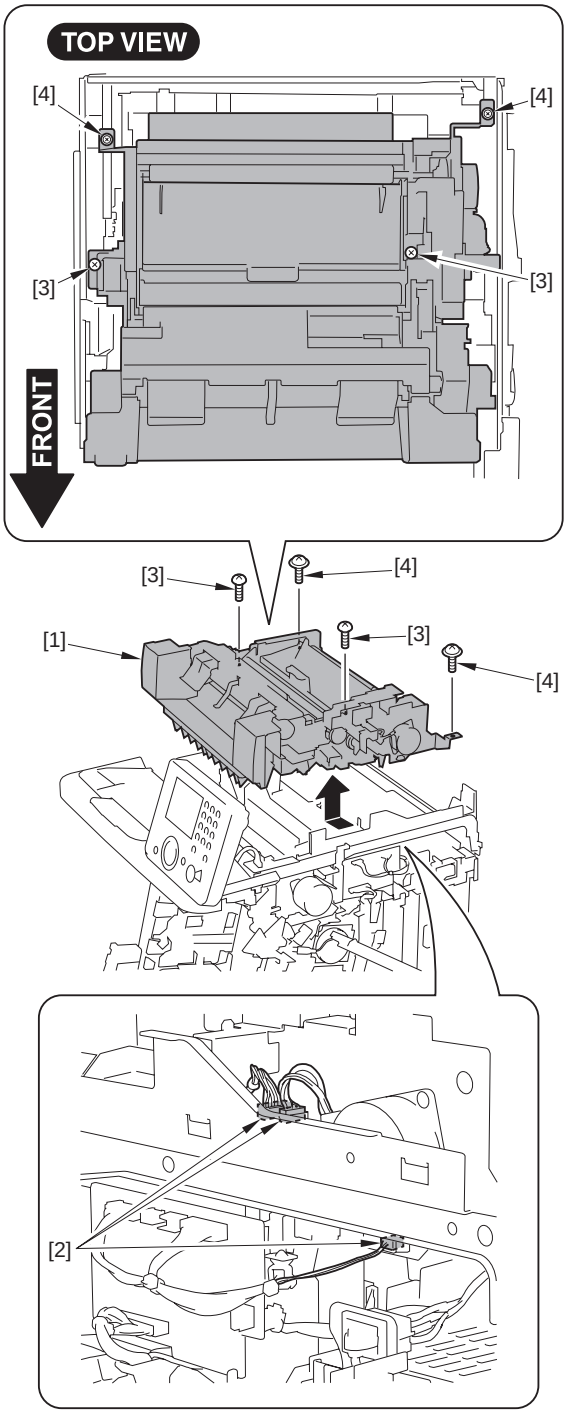


2) Turn the lever [1] in the direction of the arrow to remove the gear unit [2].



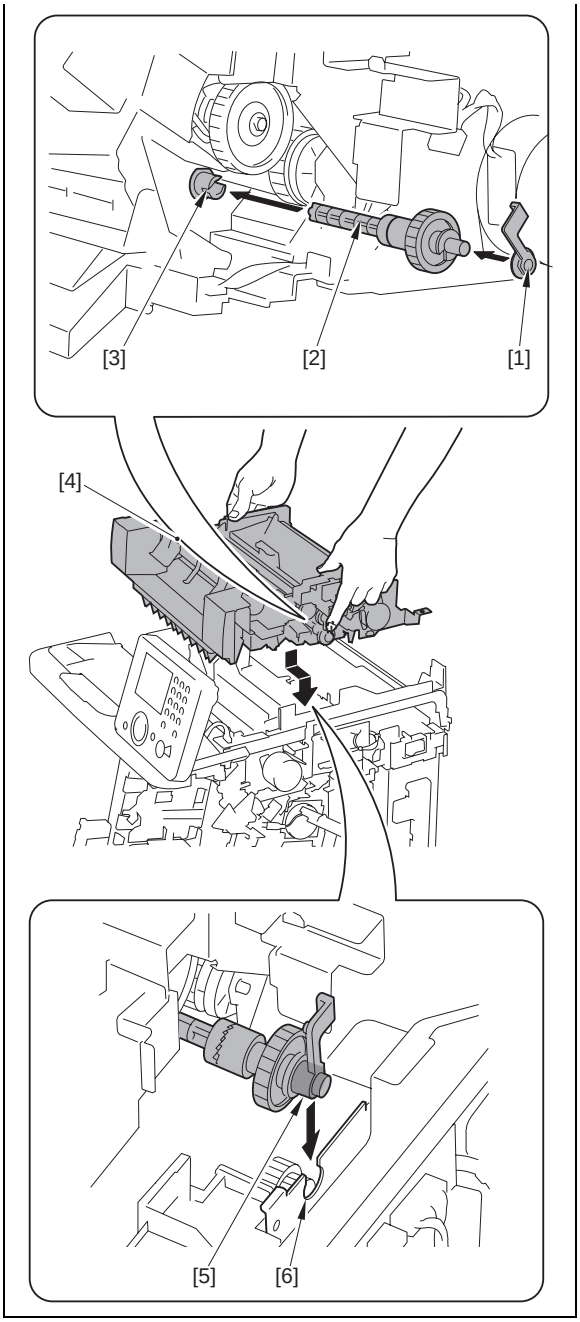
F-9-75

3) Remove the reversal unit [1].
- 3 connectors [2]
- 2 connectors (binding) [3]
- 2 screws [4]



F-9-76

Points to Note at Installation
- Before installing the reverse unit [1] to the host machine, be sure to align the gear unit [2] with the coupling [3] of the reverse unit.
- The gear unit [2] is easily detached from the coupling [3]. So, be sure to keep pushing the gear unit [2] when installing the reverse unit [1] to the host machine.



9.5.11 Reverse Motor

9.5.11.1 Before Removing the Reversal Motor

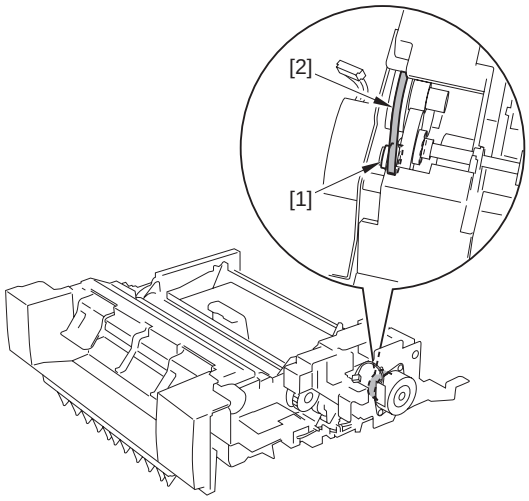
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]
2) Remove the fixing assembly.(page 10-8)Reference [Removing the Fixing Assembly]
3) Remove the rear cover unit.(page 11-12)Reference [Removing the Rear Cover Unit]
4) Remove the ADF Unit + Reader Unit.(page 5-9)Reference [Removing the ADF Unit + Reader Unit]
5) Remove the left cover.(page 11-14)Reference [Removing the Left Cover]
6) Remove the right cover.(page 11-12)Reference [Removing the Right Cover]
7) Remove the Upper Frame Unit.(page 11-20)Reference [Removing the Upper Frame Unit]
8) Remove the Reversal Unit.(page 9-29)Reference [Removing the Reversal Unit]

9.5.11.2 Removing the Reversal Motor

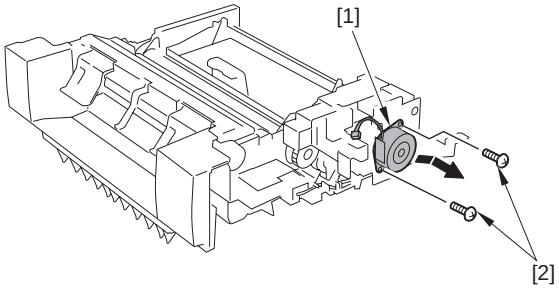
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the belt [2] from the motor gear [1].



F-9-77

2) Remove the reversal motor [1].
- 2 screws [2]



F-9-78

9.5.12 Reverse Solenoid

9.5.12.1 Before Removing the Reversal Solenoid

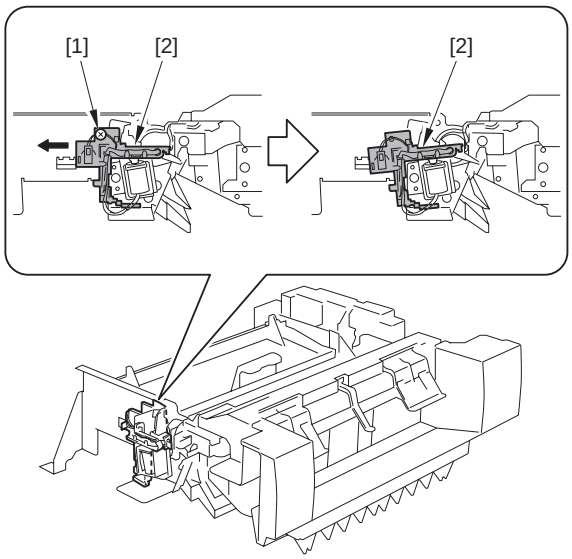
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]
2) Remove the fixing assembly.(page 10-8)Reference [Removing the Fixing Assembly]
3) Remove the rear cover unit.(page 11-12)Reference [Removing the Rear Cover Unit]
4) Remove the ADF Unit + Reader Unit.(page 5-9)Reference [Removing the ADF Unit + Reader Unit]
5) Remove the left cover.(page 11-14)Reference [Removing the Left Cover]
6) Remove the right cover.(page 11-12)Reference [Removing the Right Cover]
7) Remove the Upper Frame Unit.(page 11-20)Reference [Removing the Upper Frame Unit]
8) Remove the Reversal Unit.(page 9-29)Reference [Removing the Reversal Unit]

9.5.12.2 Removing the Reversal Solenoid

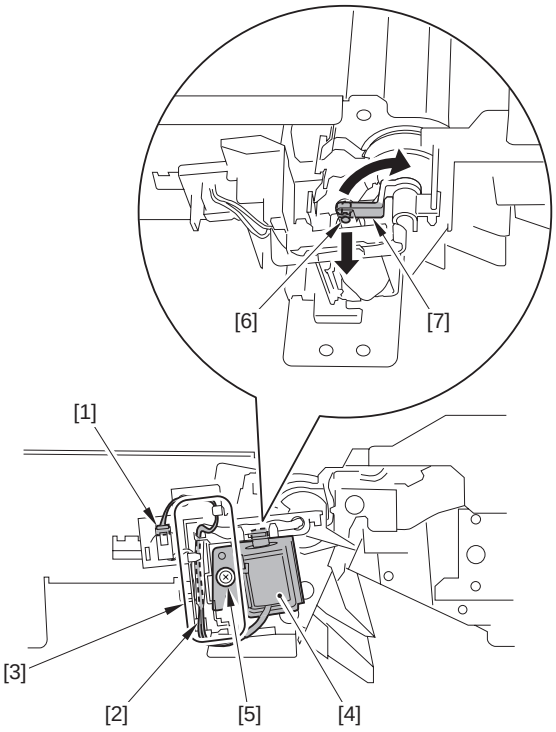
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the screw [1] to move the harness guide [2] in the direction of the arrow.



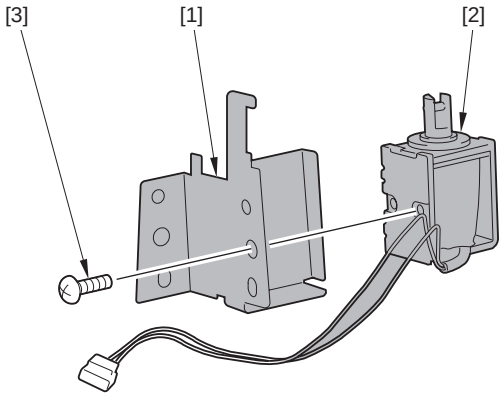
F-9-79

2) Disconnect the connector [1] and free the harness [2] from the guide [3].
3) Remove the reversal solenoid unit [4].
- 1 screw [5]
- 1 solenoid pin [6]
- 1 solenoid arm [7]



F-9-80

4) Remove the reversal solenoid [2] from the fixing plate [1].
- 1 screw [3]



F-9-81

Chapter 10 Fixing System

Contents

10.1 Overview/Configuration 10-1
10.1.1 Overview 10-1
10.2 Various Control Mechanisms 10-2
10.2.1 Controlling the Temperature of the Fixing Unit 10-2
10.2.1.1 Fixing Temperature Control 10-2
10.2.1.2 Throughput Down Control 10-3
10.2.2 Fixing Pressurizing/Release Control 10-4
10.2.2.1 Fixing Sleeve Pressuring/releasing Control 10-4
10.2.2.2 Fixing Sleeve Pressuring/releasing Control 10-5
10.3 Protection Function 10-7
10.3.1 Overview 10-7
10.3.2 Failure Detection 10-7
10.4 Parts Replacement Procedure 10-8
10.4.1 Fixing Unit 10-8
10.4.1.1 Removing the Fixing Assembly 10-8
10.4.2 Fixing Sleeve Unit 10-8
10.4.2.1 Before Removing the Fixing Sleeve Unit 10-8
10.4.2.2 Removing the Fixing Sleeve Unit 10-8
10.4.3 Fixing Drive Unit 10-12
10.4.3.1 Before Removing the Fixing Drive Unit 10-12
10.4.3.2 Removing the Fixing Drive Unit 10-12
10.4.4 Fixing Motor 10-14
10.4.4.1 Before Removing the Fixing Motor 10-14
10.4.4.2 Removing the Fixing Motor 10-15

10.1 Overview/Configuration

10.1.1 Overview

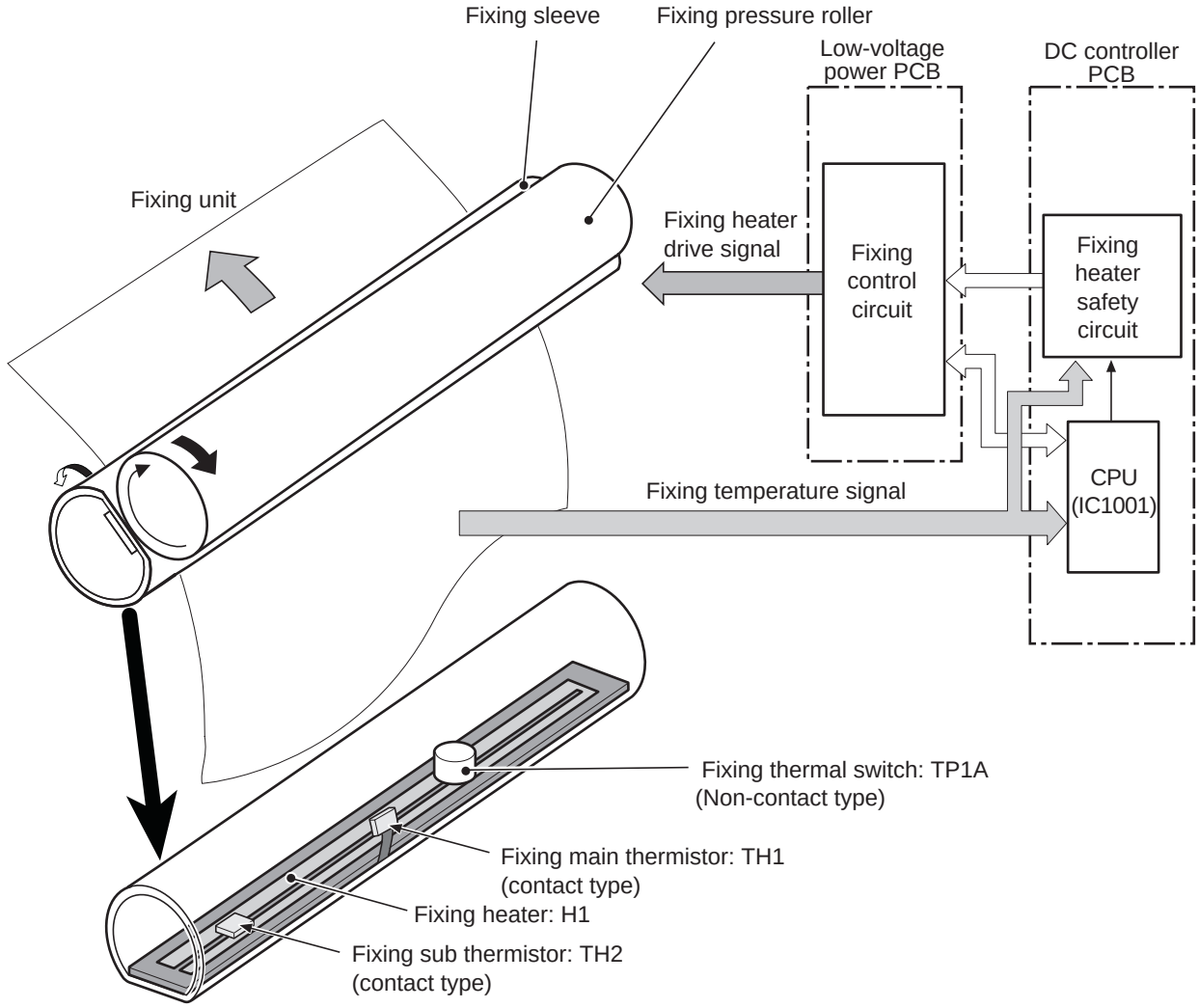
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The ceramic heater fixing method is adopted on the fixing assembly of this machine.
Temperature control of the fixing assembly is performed by the fixing control circuit and the fixing heater safety circuit according to the commands from CPU (IC1001) on DC controller PCB.

Fixing heater (H1)
A ceramic heater for heating the fixing sleeve. The heater has one piece of U-shaped heating element that practically works as 2 heaters.

Thermistors (TH1, TH2)
Thermistors for detecting the fixing temperature. The following 2 types are used.
- Fixing main thermistor (TH1): contact type thermistor for detecting the fixing sleeve temperature that is located at the center inside the fixing sleeve.
- Fixing sub thermistor (TH2): contact type thermistor for detecting the fixing heater temperature that is located at the left edge of the fixing heater.

Fixing thermal switch (TP1A)
Non-contact type thermal switch for preventing the fixing heater from overheating that is located at the center of the fixing heater. When the fixing heater overheats, the contact point opens and power to the fixing heater is cut.



F-10-1

10.2 Various Control Mechanisms

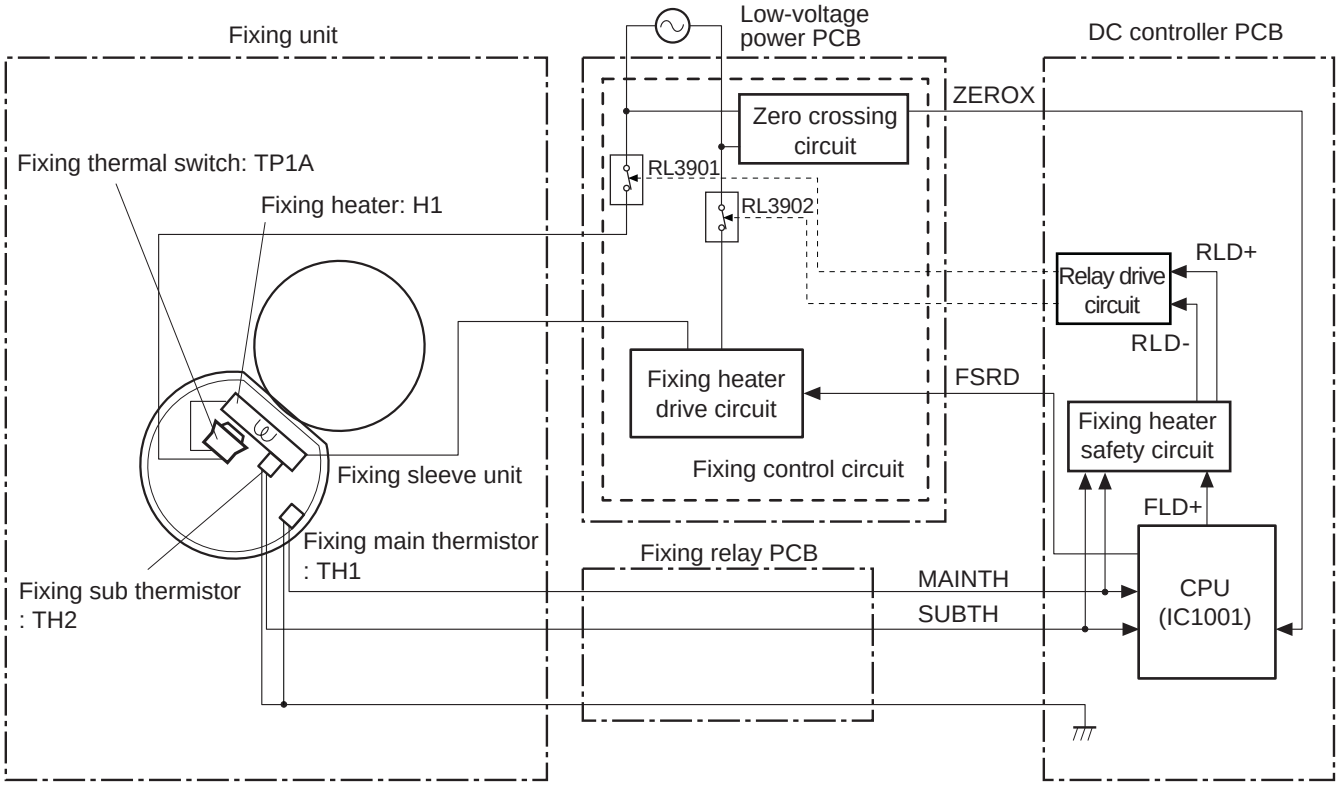
10.2.1 Controlling the Temperature of the Fixing Unit

10.2.1.1 Fixing Temperature Control

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The fixing temperature control is to detect the surface temperature of the fixing sleeve and the fixing heater, and to maintain the fixing heater temperature at targeted value according to the detected results.

The fixing sleeve temperature is monitored by the fixing main thermistor (TH1) and the fixing heater temperature is monitored by the fixing sub thermistor (TH2). Results are output to the DC controller as the fixing temperature detection signal (MAINTH, SUBTH).
CPU (IC1001) on the DC controller PCB monitors the voltage of the fixing temperature detection signals and outputs the fixing heater drive signal (FSRD) to the fixing control circuit based on the voltage value.
The fixing control circuit controls the fixing temperature based on the fixing heater drive signal so that the heater can be maintained at the targeted temperature.



F-10-2

The fixing temperature controls are divided into the following 4 types.

Initial rotation temperature control
CPU firstly turns ON the fixing heater for a specified period at power-ON and then, drives the fixing motor.
In a low temperature status such as at initial operation, the fixing sleeve may get damaged when the paper is fed because the grease inside the fixing sleeve is not yet smooth enough.
This control is to melt the grease inside the fixing sleeve by heating the fixing heater before the fixing motor drives and to lubricate the sleeve in order to prevent the fixing sleeve from being damaged.
Fixing sub thermistor (TH2) is used to detect the temperature.

Start-up temperature control
CPU heats the fixing heater to the start-up temperature in order to warm the fixing assembly up to the required temperature for fixing.
The start-up temperature varies depending on the elapsed time since previous print completion, paper types, and environments.
Fixing sub thermistor (TH2) is used to detect the temperature.

Print temperature control
CPU maintains the temperature of the fixing sleeve at its targeted temperature during print operation.
CPU gradually switches the target temperature in one printing process depending on the number of print. The targeted temperature varies depending on the paper types.
The fixing main thermistor (TH1) is used to detect the temperature.

Between-sheets temperature control
At the continuous printing in low-speed mode, the pressure roller may be overheating between sheets.
CPU reduces the temperature of hexing heater below the normal fixing temperature between sheets. The targeted temperature varies according to the between-sheets intervals and the paper types.
The fixing main thermistor (TH1) is used to detect the temperature.

10.2.1.2 Throughput Down Control

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

This control is to prevent an overheating at both ends of the fixing sleeve by keeping the required speed for paper feeding and, in addition, extending the pickup interval.

At continuous printing with the paper width narrower than A4 size (210 mm), the end of fixing sleeve may overheat.
If no paper is detected by the paper displacement sensor (SR714) on the registration roller at paper feed and, in addition, a detected temperature by the fixing sub thermistor (TH2) exceeds the specified temperature, it is considered that either universal size paper or narrower width paper than A4 size is fed.

In this case, DC controller performs the throughput down control step-by-step according to the detected temperature by the fixing sub thermistor.
When the detected temperature is 250 deg C or higher, the controller extends the pickup interval by keeping the paper feed speed to lower the throughput. The sheet interval gets longer, the fixing sleeve temperature becomes lower.
Firstly, 1st additional interval is added to the default pickup interval followed by paper feed.
If after 1st additional interval, the sub-thermistor again detects temperature of 250 deg C or higher and there is no change in the paper interval after five sheets, 2nd additional interval is added. The 3rd and 4th intervals are added similarly.

T-10-1

Fixing sub thermistor temperature	Additional intervals (sec)			
	1st	2nd	3rd	4th
250 deg C	+2	+6	+10	+14
260 deg C	+6	+10	+14	+18
270 deg C	+10	+14	+18	+22

When the fixing sub thermistor detects the temperature below 90 deg C for 2.5 sec or more after the throughput down control, throughput down control is canceled.

10.2.2 Fixing Pressurizing/Release Control

10.2.2.1 Fixing Sleeve Pressuring/releasing Control

imageRUNNER C1022 / imageRUNNER C1022i

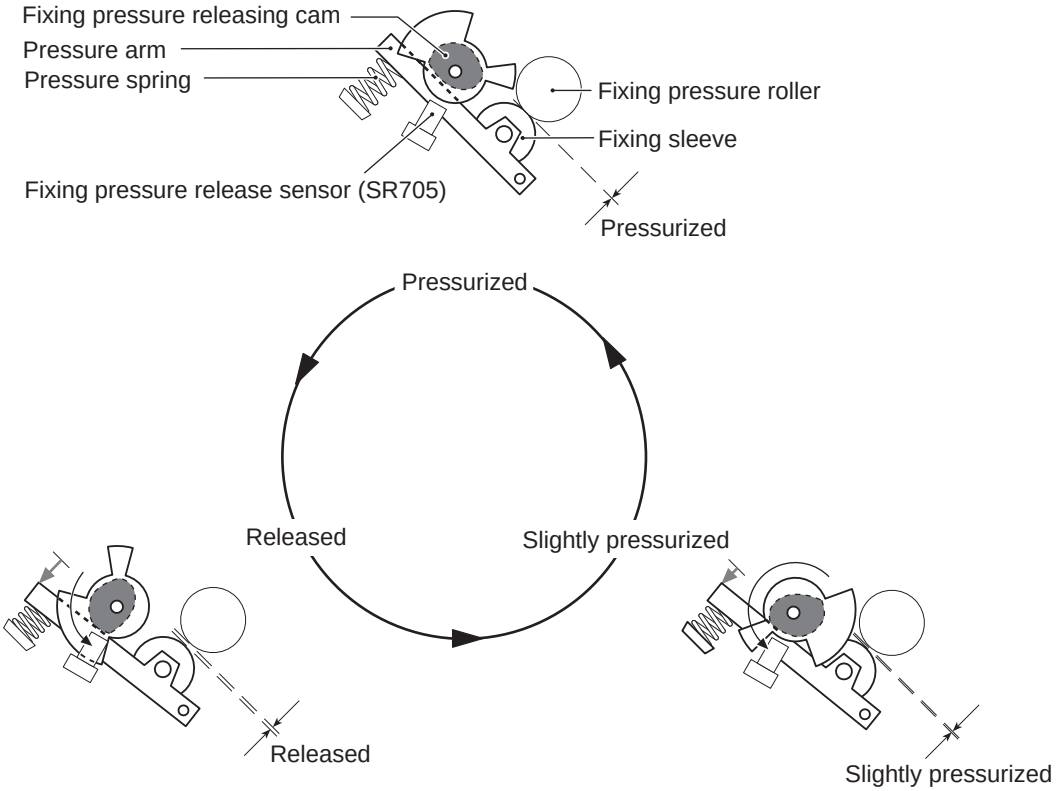
This machine controls the pressure between the fixing sleeve and the fixing pressure roller as needed to prevent the fixing failure and the breakdown of fixing assembly (see MEMO).

Pressuring/releasing of the fixing sleeve is performed by the fixing motor (M1). When the pressure spring pushes the pressure arm, the pressure is applied on the fixing film. When the fixing motor rotates reversely, the fixing pressure release cam pushes the pressure arm and the pressure on the fixing film is reduced.
The pressuring/releasing status of fixing sleeve has following 3 conditions depending on the position of the fixing pressure releasing cam.

- Pressurized condition (home position)
  Fixing film is pushed by the pressure roller.
  This condition is called at power-ON, the front cover closed and the cancel of sleep condition.

- Released condition
  The fixing film is disengaged with the pressure roller.
  This condition is called at power-OFF, JAM occurrence and the entry of sleep mode.

- Slightly pressurized condition
  The fixing film is pushed slightly by the pressure roller.
  This condition is called at printing envelope.



F-10-3

The pressuring/releasing status of the fixing sleeve is identified by ON/OFF status of the fixing pressure release sensor (SR705) and the rotation period of the fixing motor (M1).

MEMO:
If pulling out jam paper with fixing sleeve pressured, the fixing sleeve may get damaged. In addition, if the pressurized condition continues for a long time, a mark may remain on the nip of the fixing sleeve.
To prevent those, there is a mechanism for releasing the fixing sleeve pressure.

Error Codes:

E840	Error in pressure release mechanism When the pressure control is commanded, if the pressurized condition (home position) cannot be detected after 2.5 sec, the machine stops and an error code is displayed on a control panel.
	Error in no fixing assembly When the pressure control is commanded, if the pressure release sensor (SR705) is not turned ON after 2.5 sec, the machine stops and a message indicating the absence of the fixing assembly is displayed.

10.2.2.2 Fixing Sleeve Pressuring/releasing Control

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

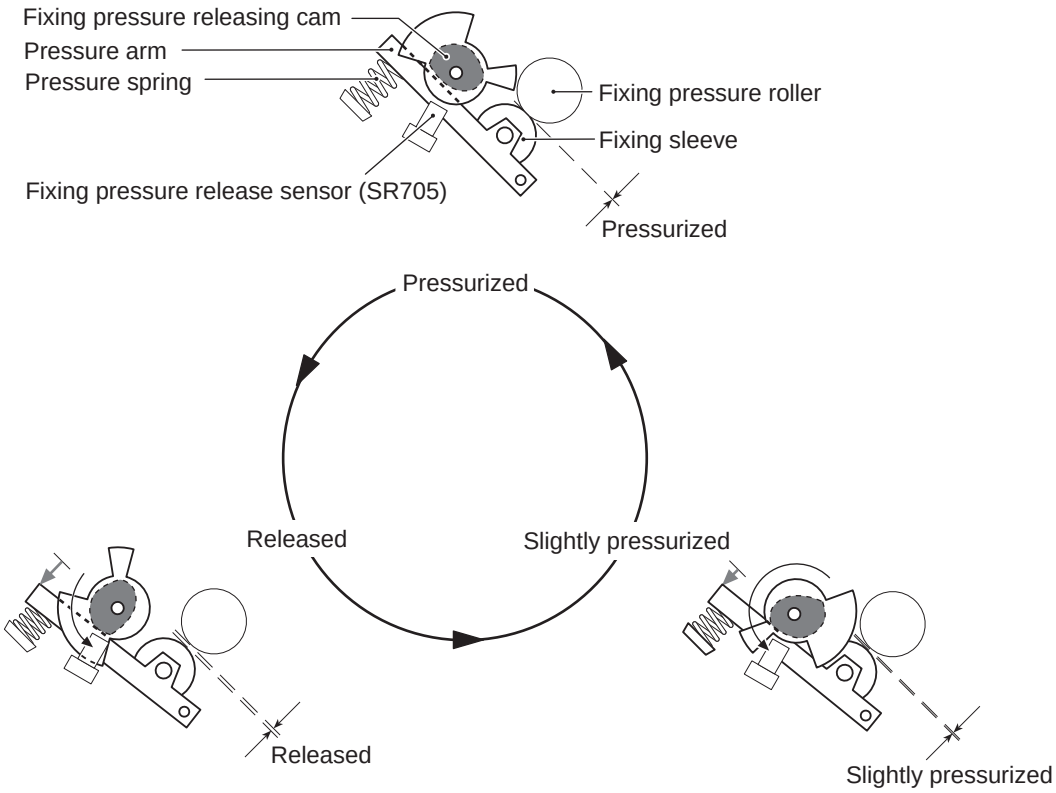
This machine controls the pressure between the fixing sleeve and the fixing pressure roller as needed to prevent the fixing failure and the breakdown of fixing assembly (see MEMO).

Pressuring/releasing of the fixing sleeve is performed by the fixing motor (M1). When the pressure spring pushes the pressure arm, the pressure is applied on the fixing sleeve. When the fixing motor rotates reversely, the fixing pressure release cam pushes the pressure arm and the pressure on the fixing sleeve is reduced. The pressuring/releasing status of fixing sleeve has following 3 conditions depending on the position of the fixing pressure releasing cam.

- Pressurized condition (home position)
  Fixing sleeve is pushed by the pressure roller.
  This condition is called at power-ON, the front cover closed and the cancel of sleep condition.

- Released condition
  The fixing sleeve is disengaged with the pressure roller.
  This condition is called at power-OFF, JAM occurrence and the entry of sleep mode.

- Slightly pressurized condition
  The fixing sleeve is pushed slightly by the pressure roller.
  This condition is called at printing envelope.



F-10-4

The pressuring/releasing status of the fixing sleeve is identified by ON/OFF status of the fixing pressure release sensor (SR705) and the rotation period of the fixing motor (M1).

MEMO:
If pulling out jam paper with fixing sleeve pressured, the fixing sleeve may get damaged. In addition, if the pressurized condition continues for a long time, a mark may remain on the nip of the fixing sleeve.
To prevent those, there is a mechanism for releasing the fixing sleeve pressure.

Error Codes:

E840	Error in pressure release mechanism When the pressure control is commanded, if the pressurized condition (home position) cannot be detected after 2.5 sec, the machine stops and an error code is displayed on a control panel.
	Error in no fixing assembly When the pressure control is commanded, if the pressure release sensor (SR705) is not turned ON after 2.5 sec, the machine stops and a message indicating the absence of the fixing assembly is displayed.

10.3 Protection Function

10.3.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

This machine has the 3 types of protective functions for fixing assembly.
If an overheating is detected at the fixing assembly, those protective functions stop the power to the fixing heater.

Protective function by CPU
If the voltage of the fixing main thermistor temperature detection signal (MAINTH) is approx. 1.26 V or lower (equivalent to 240 deg C or higher), or the voltage of the fixing sub thermistor temperature detection signal (SUBTH) is approx. 0.48 V or lower (equivalent to 280 deg C or higher), the CPU determines the fixing assembly failure and performs the following processing.
1) CPU stops output the fixing heater drive signal (FSRD) and turns the heater OFF.
2) CPU stops output the fixing sub thermistor relay signal (RLD+).
3) The relay drive circuit releases the relays (RL3901 and RL3902) to stop power to the fixing heater.

Protective function by fixing heater safety circuit
If the voltage of the fixing main thermistor temperature detection signal (MAINTH) is 1.15 V or lower (equivalent to 250 deg C or higher), or the voltage of the fixing sub thermistor temperature detection signal (SUBTH) is approx. 0.44 V or lower (equivalent to 290 deg C or higher), the fixing heater safety circuit determines the fixing assembly failure and performs the following processing.
1) The circuit stops output the main thermistor relay drive (RLD-).
2) The circuit stops output the sub thermistor relay drive signal (RLD+).
3) The relay drive circuit releases the relays (RL3901 and RL3902) to stop the power to the fixing heater.

Protective function by thermal switch
When the fixing heater overheats and the detected temperature of the fixing thermal switch (TP1A) exceeds approx. 250 deg C, the fixing thermal switch breaks contact of the line and the power supply to the fixing heater is immediately cut off.

> ⚠
> The actual temperature of the fixing heater is about 40 degrees higher than the detected temperature by the fixing thermal switch, as there are some space between the thermal switch and the fixing heater.

10.3.2 Failure Detection

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

If any of the following conditions is true, CPU determines the fixing assembly failure. In this case, it stops the machine and displays an error code on a control panel.

Start-up failure (Warm-up failure)
If any of the followings is detected, CPU determines the start-up failure.
- If the detected temperature of the fixing sub thermistor does not reach 130 deg C within 40 seconds from energization to the fixing heater during wait period.
- If the fixing assembly does not enter ready within 40 seconds from energization to the fixing heater at print operation start.

Abnormal low temperature of fixing main thermistor
If any of the followings is detected, CPU determines the abnormal low temperature of the fixing main thermistor.
- If the detected temperature of the fixing main thermistor is kept below 40°C for 4 seconds continuously from energization of fixing heater until residual paper detection is completed during wait period.
- If the detected temperature of the fixing main thermistor is kept below 70 degC for 4 seconds continuously from energization of fixing heater until paper reaches the fixing assembly at the start of print operation.
- If the detected temperature of the fixing main thermistor is kept below 130 deg C for 0.5 second continuously from paper reaches the fixing unit until heater is turned OFF during print period.

Abnormal high temperature of fixing main thermistor
The CPU determines the abnormal high temperature of fixing main thermistor, if the detected temperature of the fixing main thermistor is kept 240 deg C or higher for 0.1 second.

Abnormal low temperature of sub thermistor
If any of the followings is detected, CPU determines the abnormal low temperature of the fixing sub thermistor.
- If the detected temperature of the fixing sub thermistor is kept below 60 deg C for 4 seconds continuously from energization of the fixing heater until residual paper detection is completed during wait period.
- If the detected temperature of the sub thermistor is kept below 90 deg C for 2.5 seconds continuously from energization of the fixing heater until paper reaches the fixing assembly at the start of print operation.
- If the detected temperature of the fixing sub thermistor is kept below 120 deg C for 0.5 second continuously, from paper reaches the fixing assembly until heater is turned OFF during print period.
- If the detected temperature of fixing sub thermistor is kept below 50 deg C for 5 seconds continuously during stand-by temperature control.

Abnormal high temperature of fixing sub thermistor
The CPU determines the abnormal high temperature of fixing sub thermistor, if the detected temperature of the fixing sub thermistor is kept 280 deg C or higher continuously for 0.5 second.

Drive circuit error
CPU determines the drive circuit error, if the zero crossing signal (ZEROX) is kept on being out of frequency range 40 Hz to 70 Hz for 5 seconds.

10.4 Parts Replacement Procedure

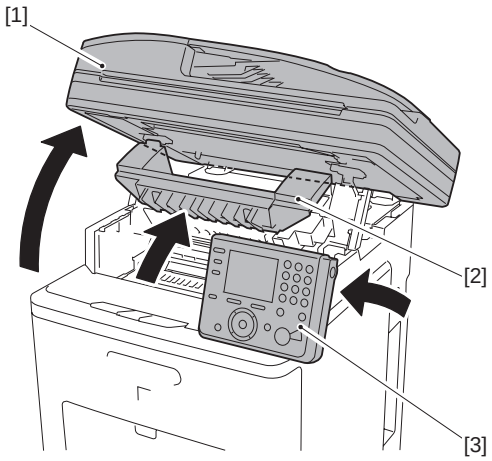
10.4.1 Fixing Unit

10.4.1.1 Removing the Fixing Assembly

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

> **Points to Note At Operation**
> When removing the fixing assembly, perform the operation after the fixing assembly is surely cooled. The fixing assembly just after printing may cause burn injury.

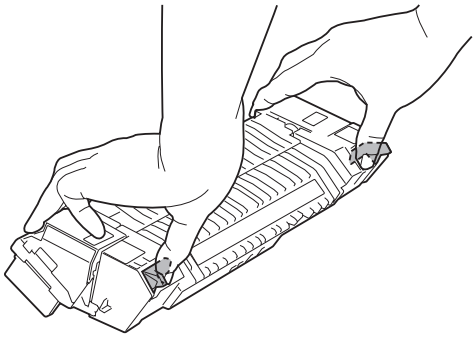
1) Open the ADF Unit + Reader Unit [1].
2) Open the fixing cover [2].
3) Raise the control panel unit[3] forward.

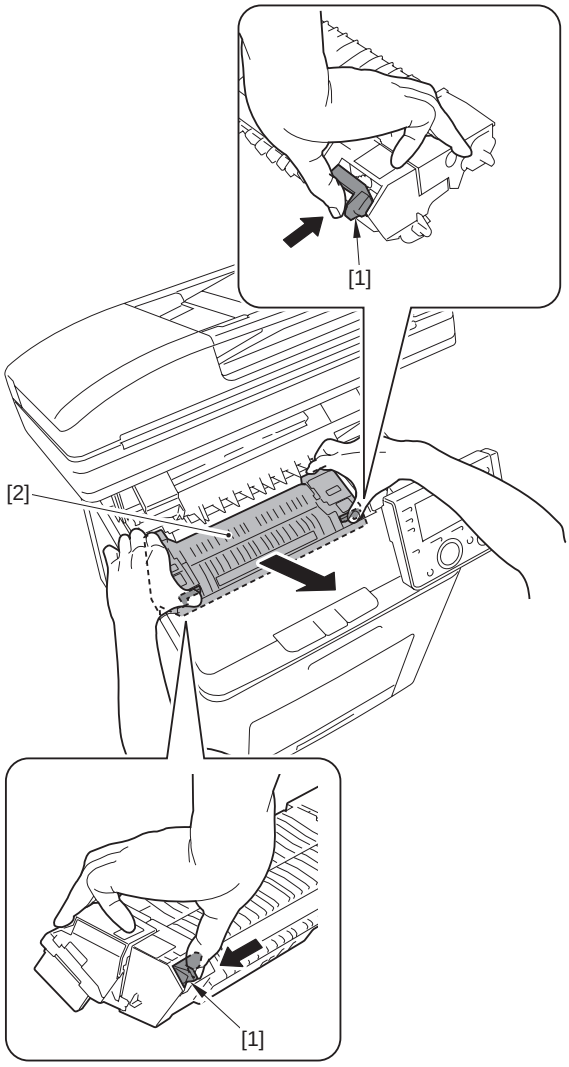


F-10-5

4) While pressing the fixing assembly lever [1] (2 points at left and right), remove the fixing assembly [2].

> **Points to Note When holding the fixing assembly**
> Be sure to hold the fixing assembly with three fingers or more when lifting the fixing assembly to prevent it from falling.





F-10-6

10.4.2 Fixing Sleeve Unit

10.4.2.1 Before Removing the Fixing Sleeve Unit

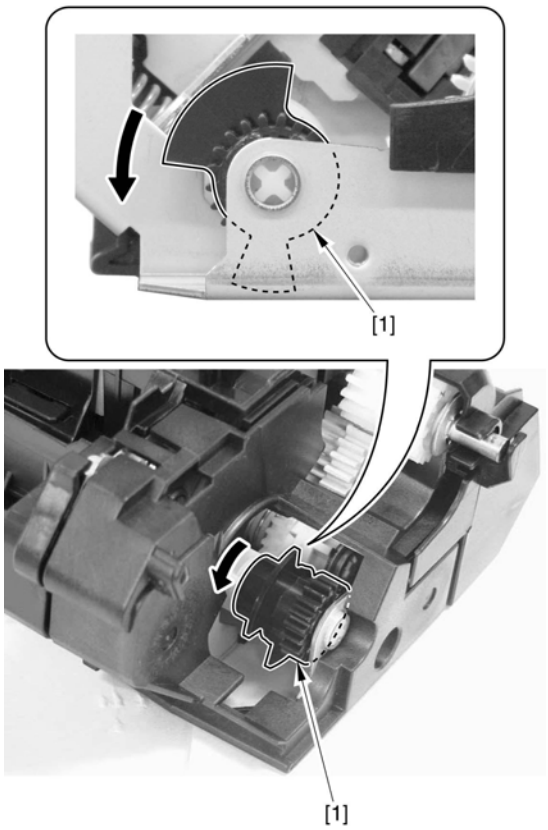
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the fixing assembly.(page 10-8) Reference [Removing the Fixing Assembly]

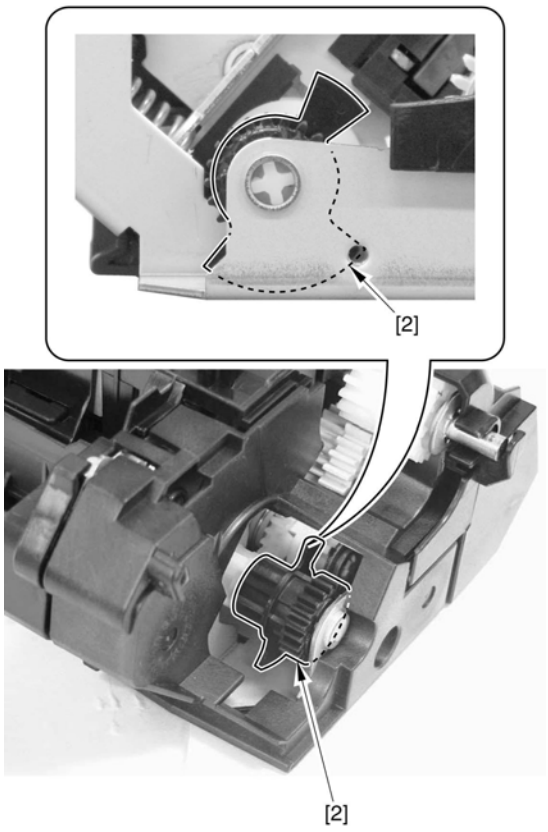
10.4.2.2 Removing the Fixing Sleeve Unit

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Turn the gear [1] in the direction of the arrow to the position [2].

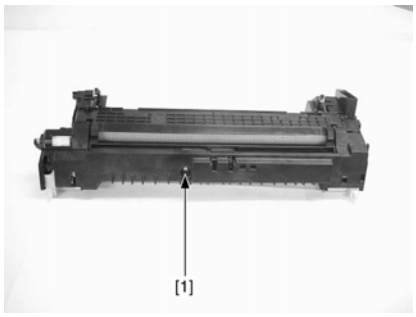


F-10-7



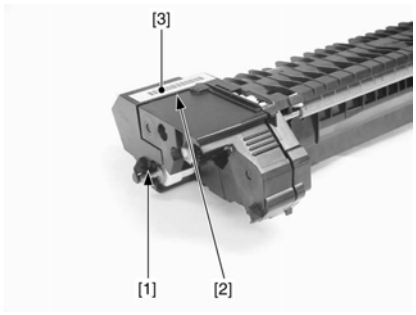
F-10-8

2) Remove the screw [1].



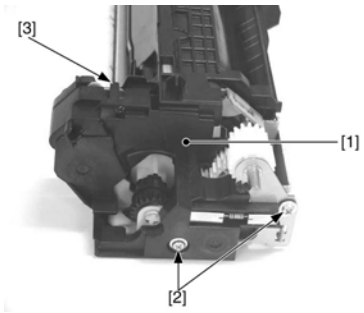
F-10-9

3) Remove the claw [1] and the claw [2] in the order, and remove the cover [3].



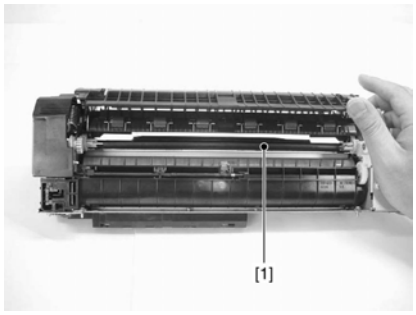
F-10-10

4) Remove the cover [1].
- 2 screws [2]
- 1 claw [3]

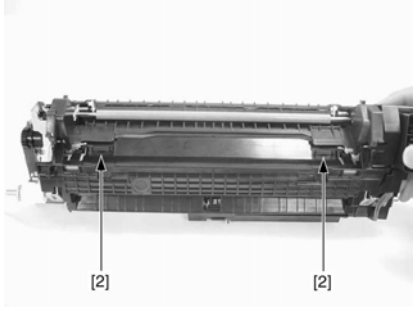


F-10-11

5) Remove the guide [1].
- 2 claws [2]

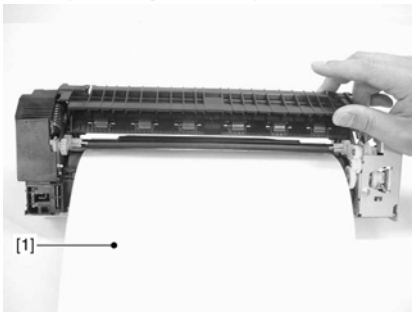


F-10-12

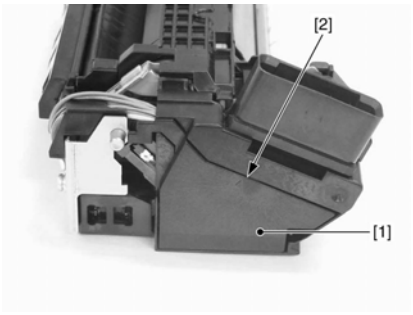


F-10-13

When removing the guide, be sure to set a protection sheet [1] around the fixing sleeve to prevent damage/scar.

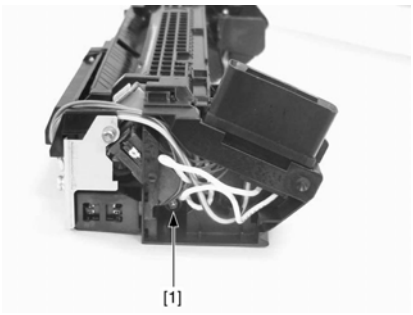


6) Remove the cover [1].
- 1 claw [2]



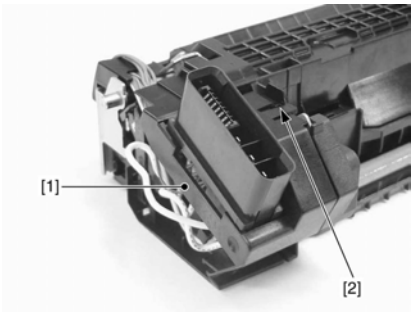
F-10-14

7) Remove the screw [1].



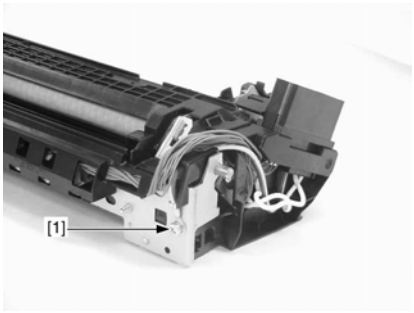
F-10-15

8) Remove the connector assembly [1].
- 1 claw [2]



F-10-16

9) Remove the screw [1].

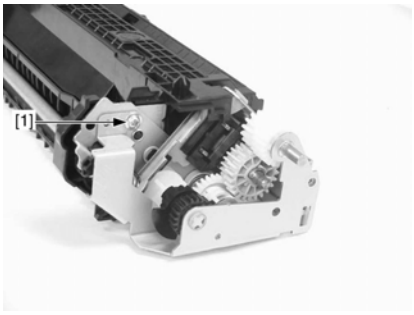


F-10-17

10) Remove the screw [1].

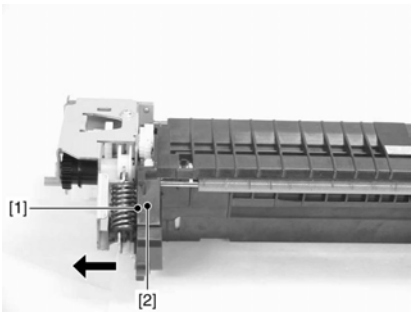
F-10-18

11) Remove the screw [1].



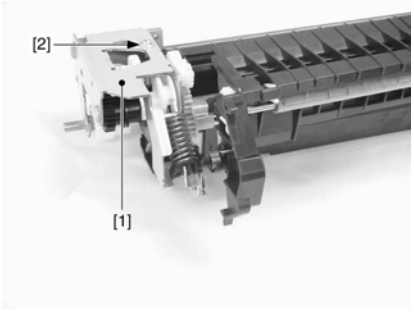
F-10-19

12) Slide the side plate [1] to remove the unit [2].



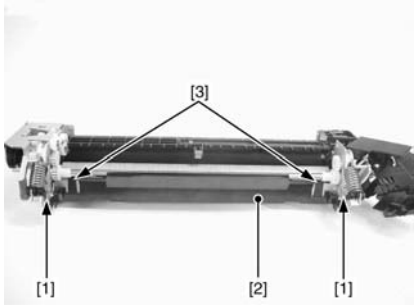
F-10-20

13) Remove the plate [1].
- 1 screw [2]



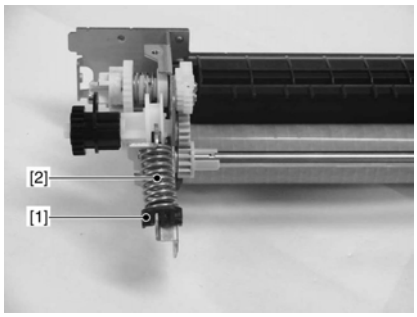
F-10-21

14) Remove the 2 parts of [1] from the side plate to remove the unit [2].
- 2 claws [3]



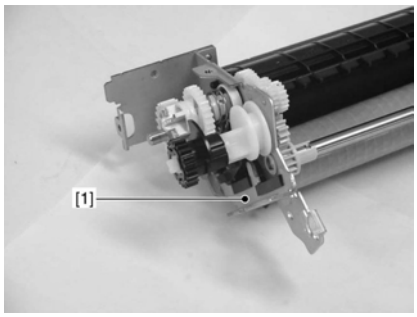
F-10-22

15) Remove the spring holder [1] to remove the spring [2].



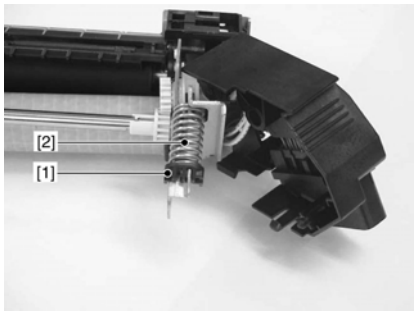
F-10-23

16) Remove the plate [1].



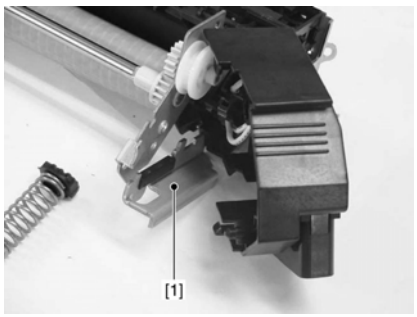
F-10-24

17) Remove the spring holder [1] to remove the spring [2].



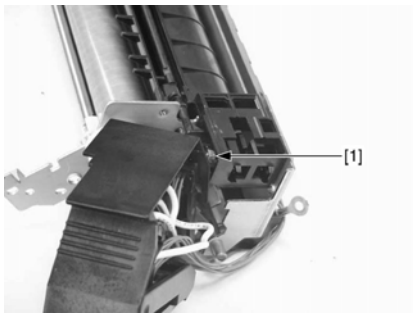
F-10-25

18) Remove the plate [1].



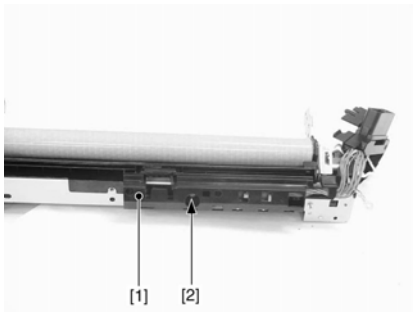
F-10-26

19) Disconnect the connector [1].



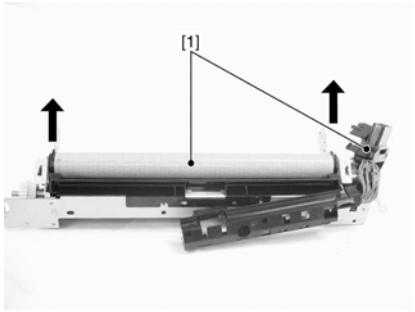
F-10-27

20) Remove the sensor unit [1].
- 1 screw [2]



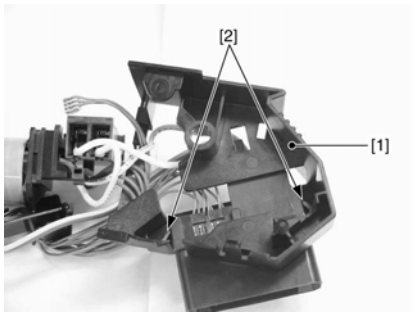
F-10-28

21) Remove the fixing sleeve unit [1].



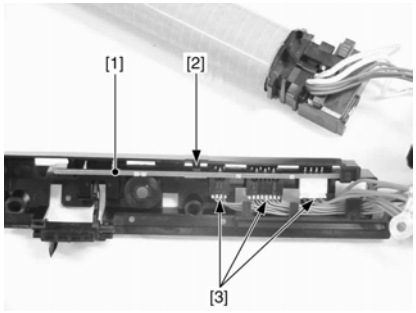
F-10-29

22) Remove the cover [1].
- 2 claws [2]



F-10-30

23) Remove the PCB [1].
- 1 claw [2]
- 3 connectors [3]



F-10-31

- Do not disassemble the fixing sleeve unit in the field.
Disassembling it may cause a functional fault.

10.4.3 Fixing Drive Unit

10.4.3.1 Before Removing the Fixing Drive Unit

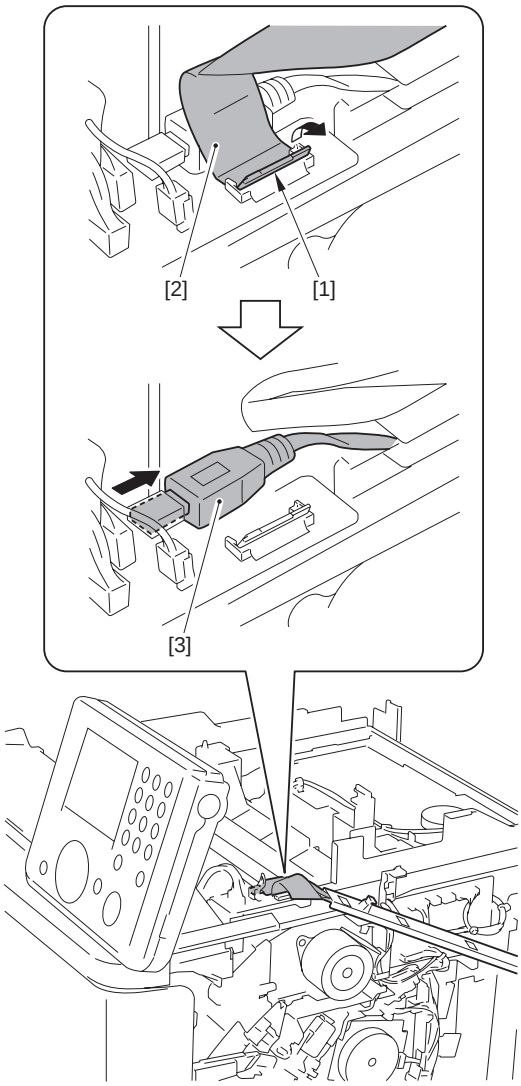
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the fixing assembly.(page 10-8) Reference [Removing the Fixing Assembly]
3) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
4) Remove the ADF Unit + Reader Unit.(page 5-9) Reference [Removing the ADF Unit + Reader Unit]
5) Remove the left cover.(page 11-14) Reference [Removing the Left Cover]
6) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]
7) Remove the Upper Frame Unit.(page 11-20) Reference [Removing the Upper Frame Unit]
8) Remove the Reversal Unit.(page 9-29) Reference [Removing the Reversal Unit]

10.4.3.2 Removing the Fixing Drive Unit

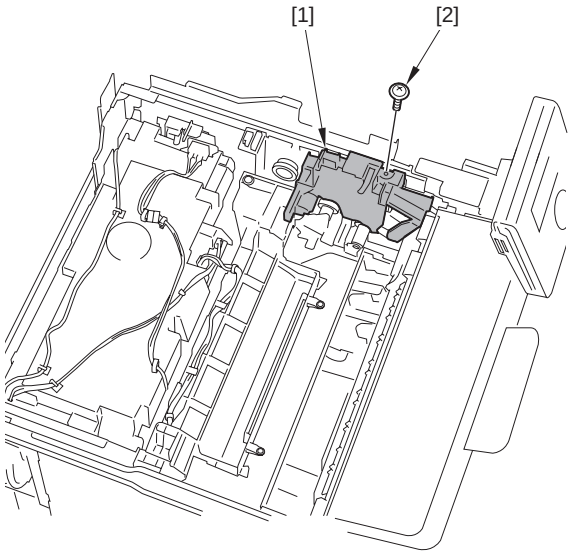
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Open the cable holder [1] to remove the flat cable [2].
2) Disconnect the USB connector [3].



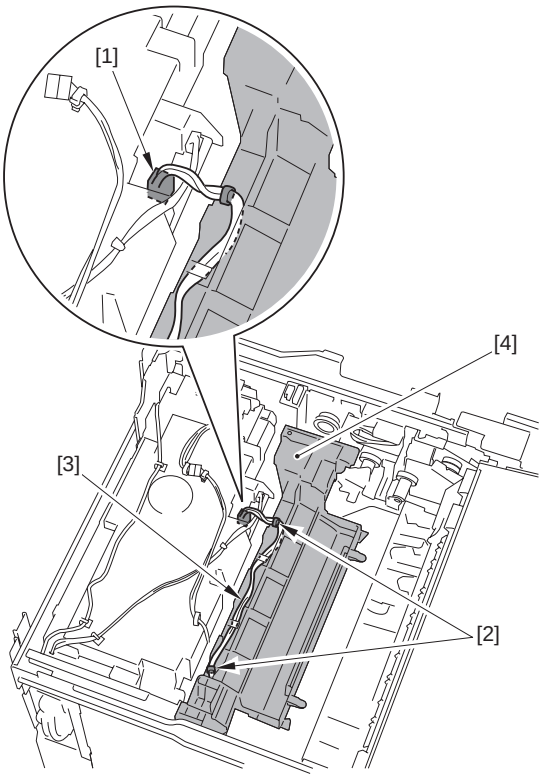
F-10-32

3) Remove the cover [1].
- 1 screw [2]



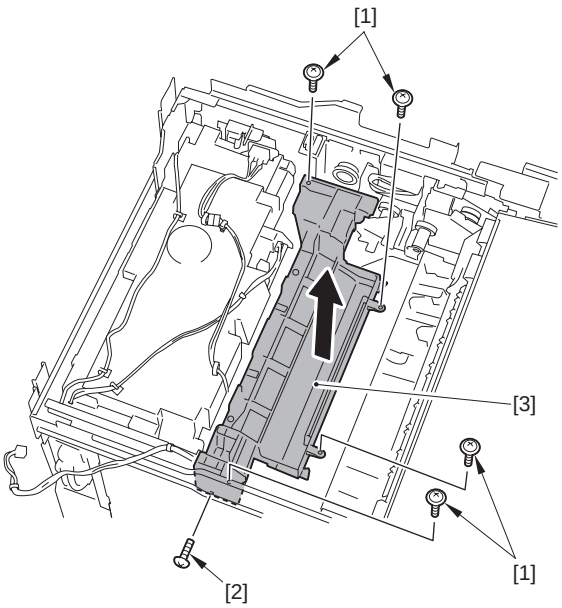
F-10-33

4) Disconnect the connector [1] and remove the 2 harness bands [2] and the harness [3] from the harness guide cover [4].



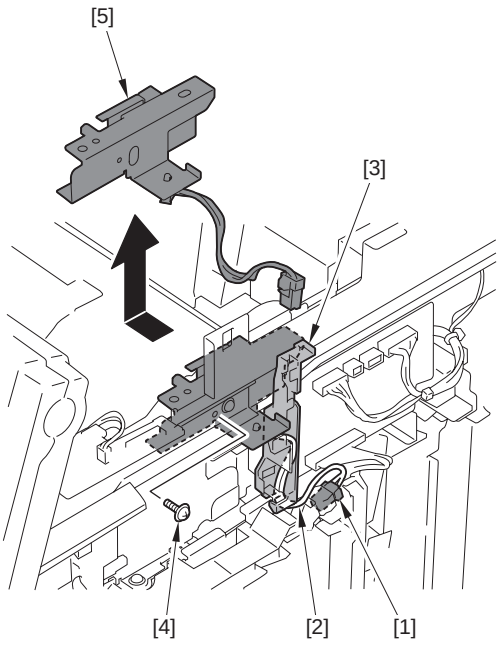
F-10-34

5) Remove the 4 screws [1] and the screw (binding) [2] to remove the harness guide cover [3].



F-10-35

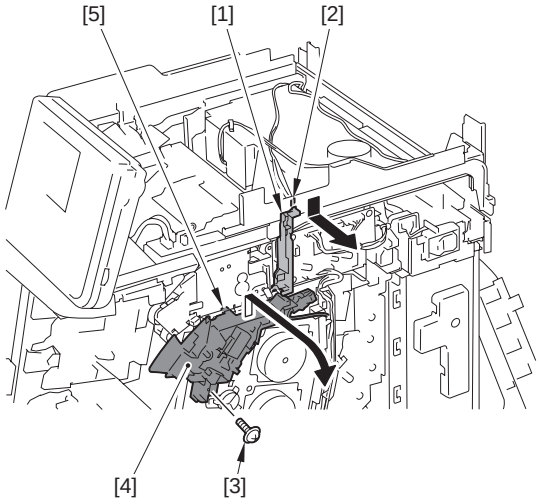
6) Disconnect the connector [1] and free the harness [2] from the harness guide [3].
7) Remove the screw [4] to remove the switch unit [5].



F-10-36

8) Remove the harness guide [1].
- 1 claw [2]

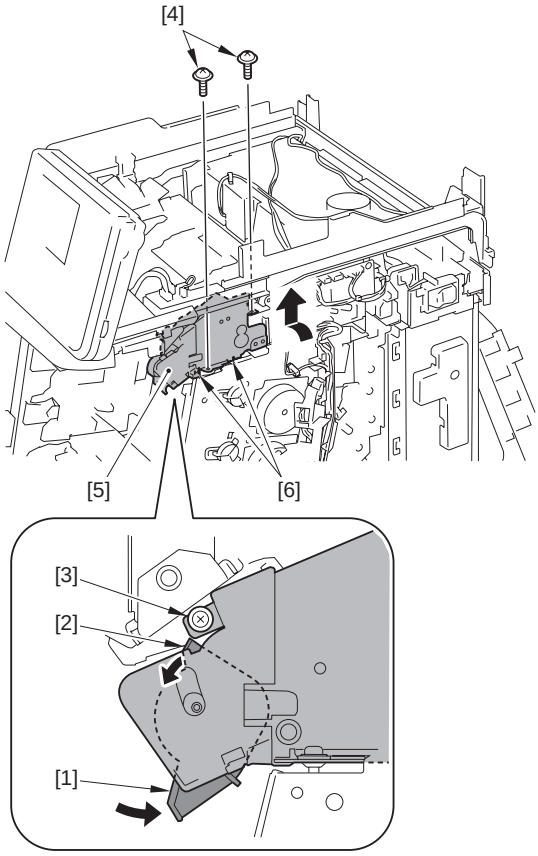
9) Remove the screw [3], move the interlock switch unit [4] in the direction of the arrow and release the hook [5] to remove the interlock switch unit [4].



F-10-37

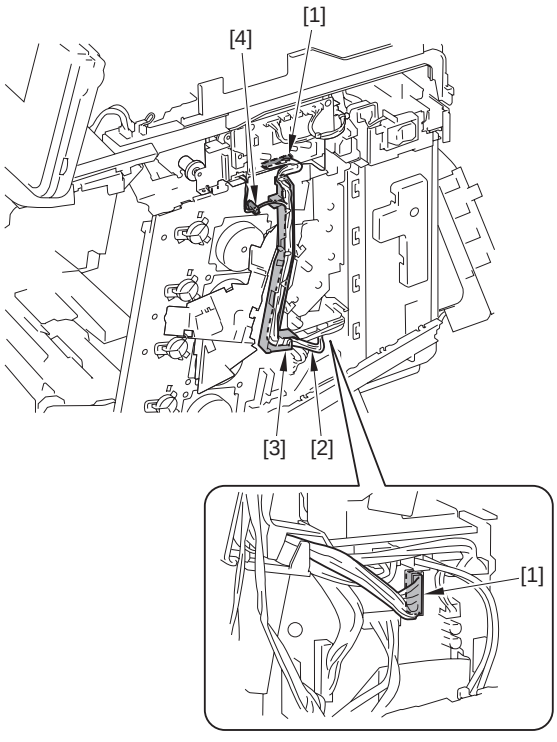
10) Push the lever [1], and remove the screw [3] while lowering the projection [2].
11) Remove the 2 screws [4], move the duplex feed drive unit [5] in the direction of the arrow and release the 2 projections [6] to remove the duplex feed drive unit [5].

Point to Note at Work
The screw [3] is located at approx. 20mm rear side. Do not drop the screw [3] when removing/tightening.



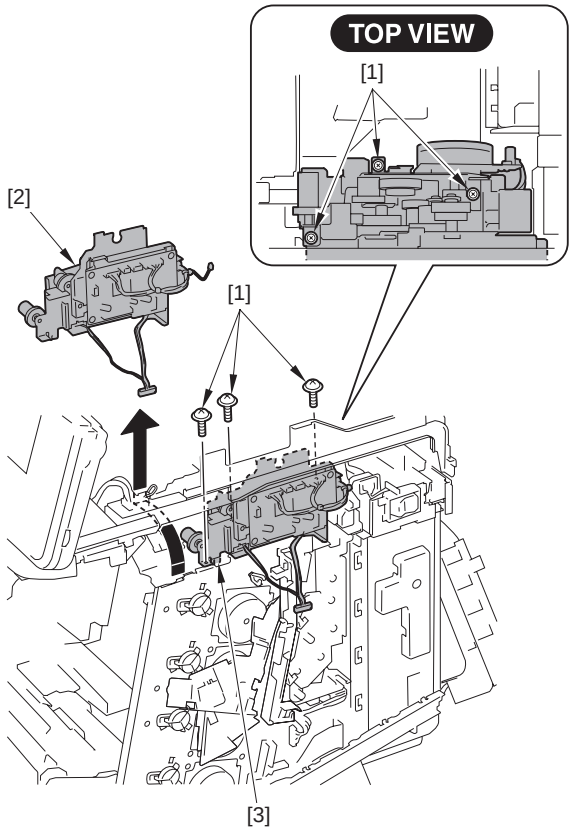
F-10-38

12) Disconnect the 2 connectors [1] and free the harness [2] from the harness guide [3] and the wire saddle [4].



F-10-39

13) Remove the 3 screws [1], move the fixing drive unit [2] in the direction of the arrow and release the projection [3] to remove the fixing drive unit [2].



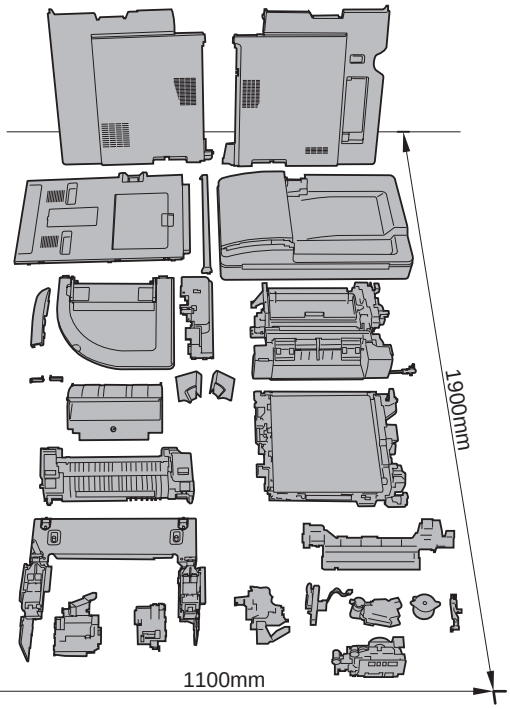
F-10-40

10.4.4 Fixing Motor

10.4.4.1 Before Removing the Fixing Motor

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

MEMO:
26 parts (e.g.: external cover, unit) need to be removed when removing the fixing motor. Be sure to have enough space equivalent to 1,900mm x 1,100mm for storing parts.



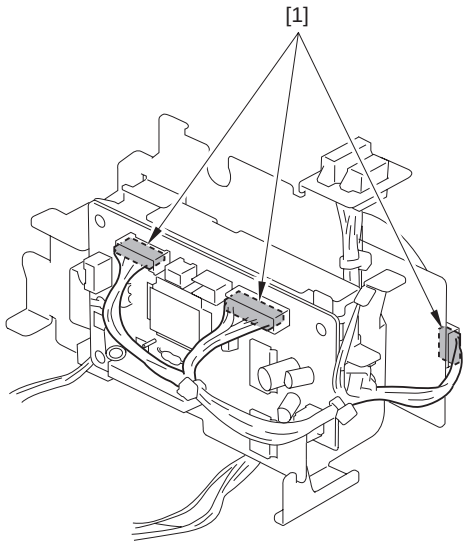
1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]

2) Remove the fixing assembly.(page 10-8) Reference [Removing the Fixing Assembly]
3) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
4) Remove the ADF Unit + Reader Unit.(page 5-9) Reference [Removing the ADF Unit + Reader Unit]
5) Remove the left cover.(page 11-14) Reference [Removing the Left Cover]
6) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]
7) Remove the Upper Frame Unit.(page 11-20) Reference [Removing the Upper Frame Unit]
8) Remove the Reversal Unit.(page 9-29) Reference [Removing the Reversal Unit]
9) Remove the Fixing Drive Unit.(page 10-12) Reference [Removing the Fixing Drive Unit]

10.4.4.2 Removing the Fixing Motor

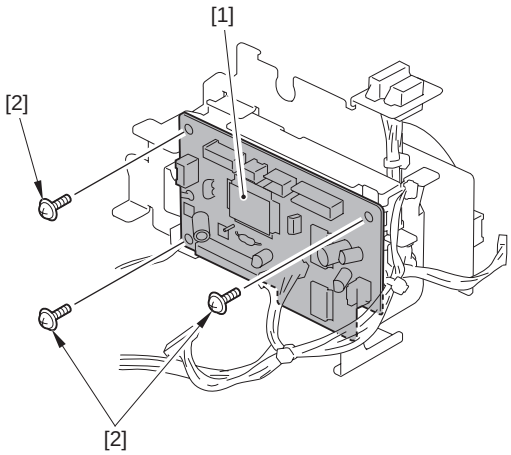
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Disconnect the 3 connectors [1].



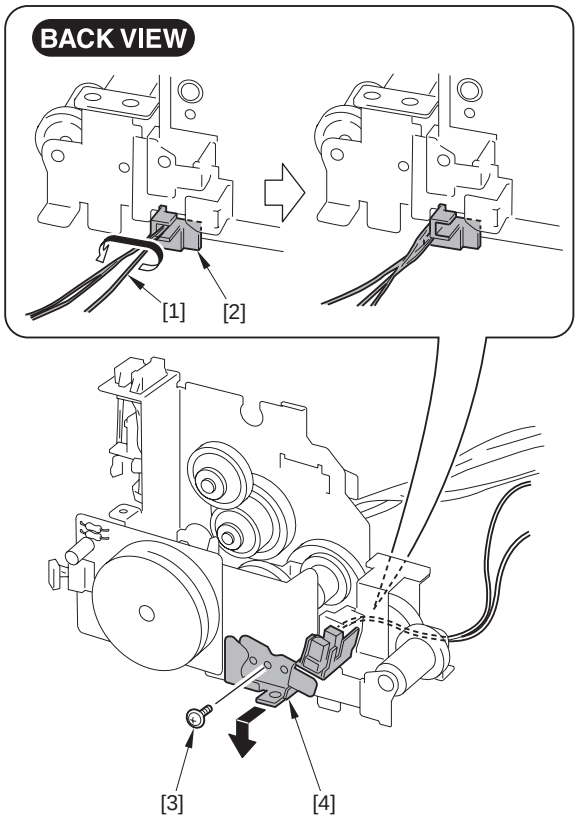
F-10-41

2) Remove the fixing driver PCB [1].
- 3 screws [2]



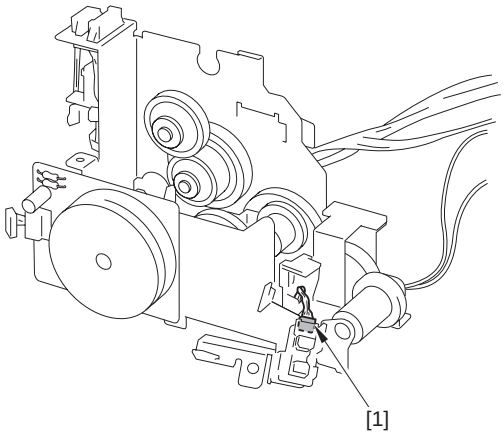
F-10-42

3) Free the harness [1] from the harness guide [2].
4) Remove the screw [3] to pull out the sensor and the attaching plate [4].



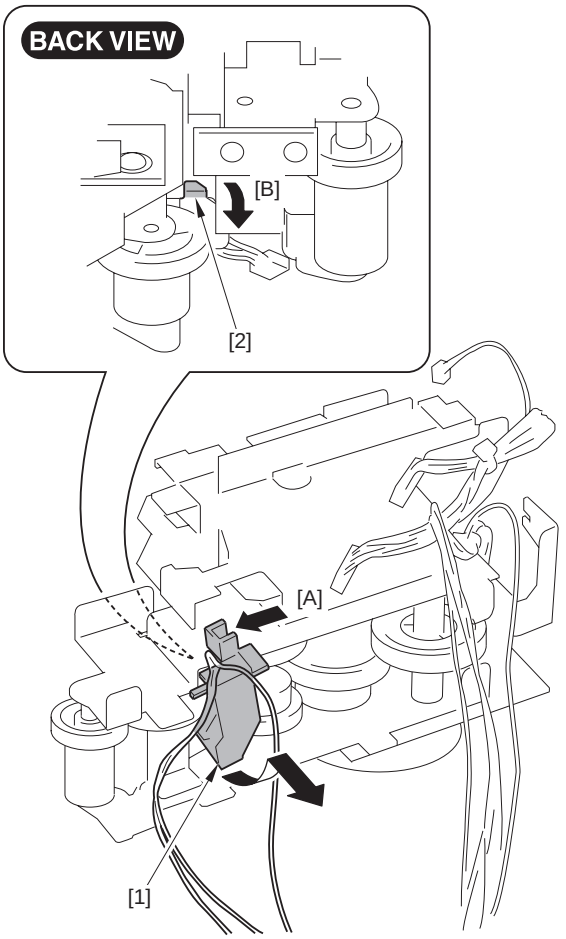
F-10-43

5) Disconnect the connector [1].



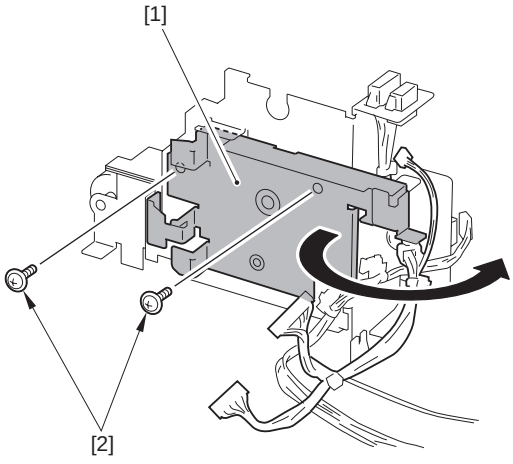
F-10-44

6) Move the harness guide [1] in the direction of the arrow [A] to remove the hook [2] in the direction of the arrow [B].
7) Remove the harness guide [1].



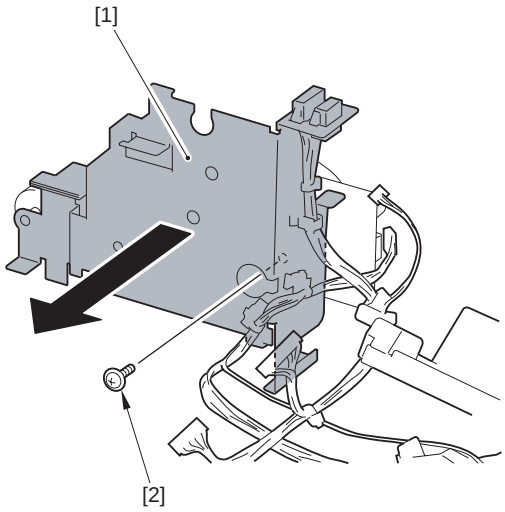
F-10-45

8) Remove the plate [1].
- 2 screws [2]



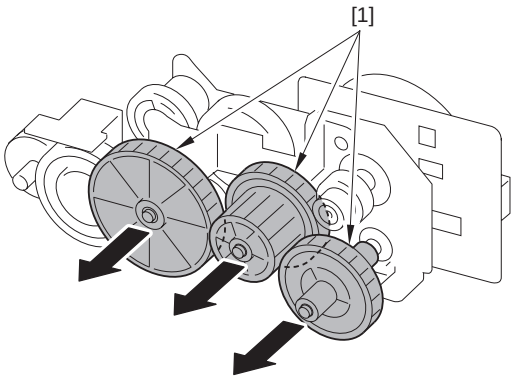
F-10-46

9) Remove the fixing drive unit support plate [1].
- 1 screw (black) [2]



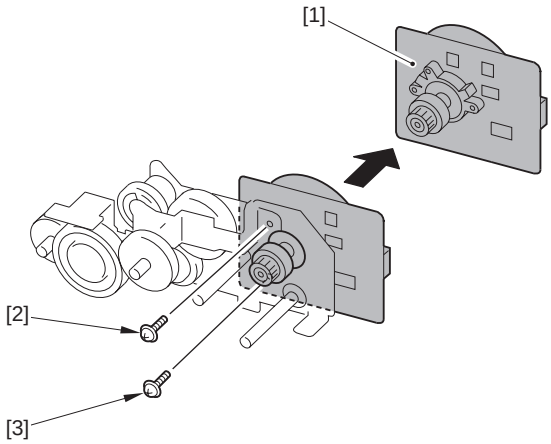
F-10-47

10) Remove the 3 gears [1]



F-10-48

11) Remove the fixing motor [1].
- 1 screw (black) [2]
- 1 screw [3]



F-10-49

Chapter 11 External and Controls

Contents

11.1 DC Controller....11-1
11.1.1 Overview....11-1
11.1.2 Operation of Each Block....11-2
11.1.3 Fan/Motor Control....11-2
11.1.4 Drum motor failure detection....11-3
11.1.5 ETB motor failure detection....11-3
11.1.6 Fixing motor failure detection....11-3
11.1.7 Main Unit Fan Failure Detection....11-3
11.1.8 Duplex Fan Failure Detection....11-3
11.2 Control Panel....11-4
11.2.1 Overview....11-4
11.3 Counter....11-5
11.3.1 Overview....11-5
11.3.2 Overview....11-6
11.3.3 Timing of Increasing the Count....11-6
11.4 Power Supply....11-7
11.4.1 Power Supply....11-7
11.4.1.1 Low-voltage Power Unit....11-7
11.4.2 Protection Function....11-8
11.4.2.1 Protective Function....11-8
11.4.2.2 Safety....11-8
11.4.3 Energy-Saving Function....11-8
11.4.3.1 Overview....11-8
11.5 Parts Replacement Procedure....11-10
11.5.1 Front Cover....11-10
11.5.1.1 Before Removing the Front Cover Unit....11-10
11.5.1.2 Removing the Front Cover Unit....11-10
11.5.2 Front Upper Cover 1....11-11
11.5.2.1 Before Removing Front upper Cover 1....11-11
11.5.2.2 Removing Front Upper Cover 1....11-11
11.5.3 Rear Cover....11-12
11.5.3.1 Removing the Rear Cover Unit....11-12
11.5.4 Right Cover....11-12
11.5.4.1 Before Removing the Right Cover....11-12
11.5.4.2 Removing the Right Cover....11-12
11.5.5 Left Cover....11-14
11.5.5.1 Before Removing the Left Cover....11-14
11.5.5.2 Removing the Left Cover....11-14
11.5.6 Delivery Tray Cover....11-15
11.5.6.1 Before Removing the Delivery Tray Cover....11-15
11.5.6.2 Removing the Delivery Tray Cover....11-15
11.5.7 Power Station Cover....11-16
11.5.7.1 Before Removing the Electrical Components Cover....11-16
11.5.7.2 Removing the Electrical Components Cover....11-16
11.5.8 Controller Box....11-16
11.5.8.1 Before Removing the Controller Box....11-16
11.5.8.2 Removing the Controller Box....11-16
11.5.9 Laser Scanner Cover....11-17
11.5.9.1 Before Removing the Laser Scanner Cover....11-17
11.5.9.2 Removing the Laser Scanner Cover....11-17
11.5.10 Upper Frame Unit....11-20
11.5.10.1 Before Removing the Upper Frame Unit....11-20

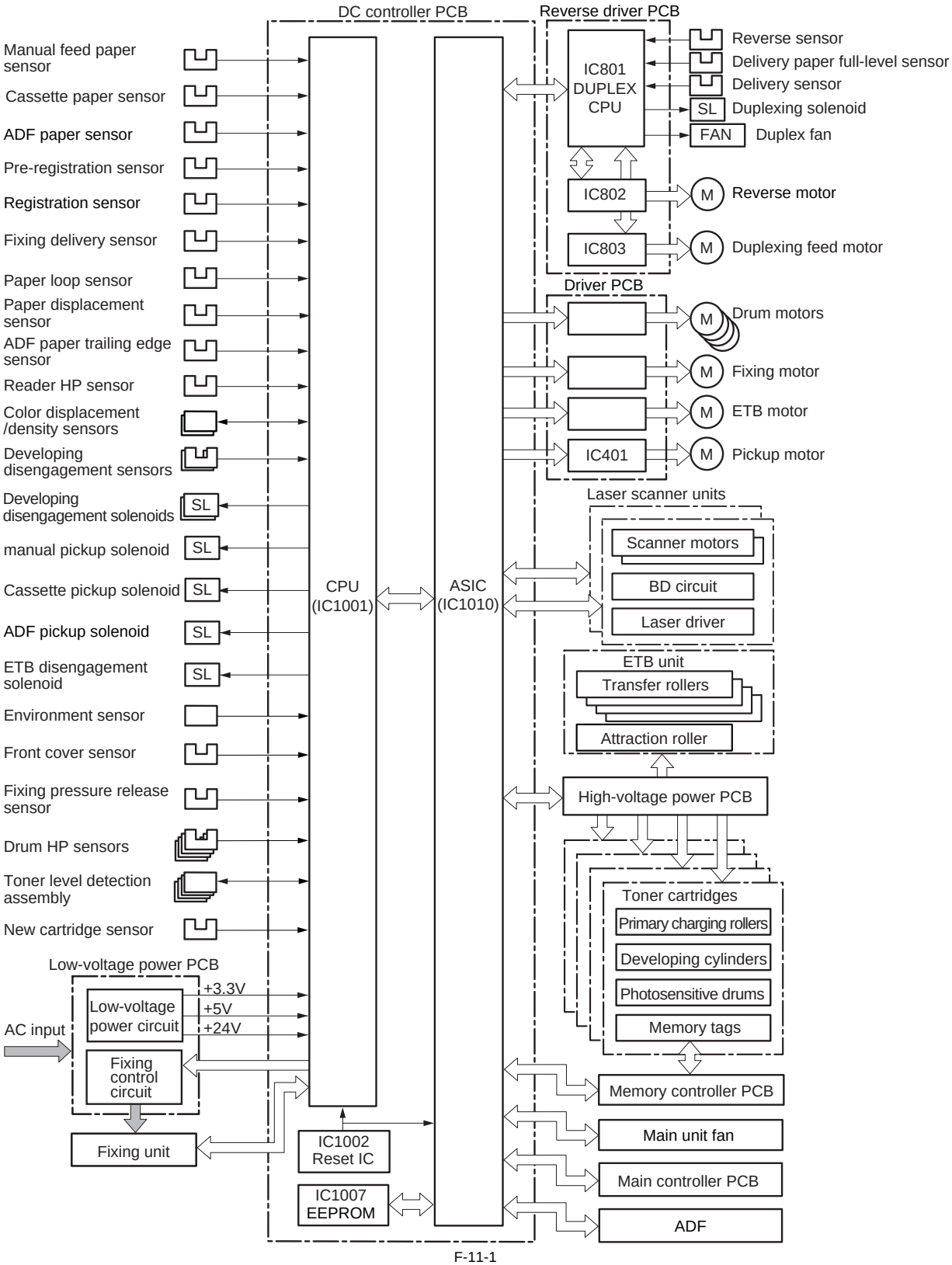
11.5.10.2 Removing the Upper Frame Unit 11-20
11.5.11 Operation Panel Unit 11-22
11.5.11.1 Removing the Control Panel Unit 11-22
11.5.11.2 Procedure after Replacing the Control Panel 11-23
11.5.12 NCU Board 11-23
11.5.12.1 Before Removing the NCU PCB 11-23
11.5.12.2 Removing the NCU PCB 11-23
11.5.13 DC Controller PCB 11-24
11.5.13.1 Before Removing the DC Controller PCB 11-24
11.5.13.2 Removing the DC Controller PCB 11-24
11.5.13.3 Procedure after Replacing the DC controller PCB 11-24
11.5.14 Memory Controller PCB 11-24
11.5.14.1 Before Removing the Memory Controller PCB 11-24
11.5.14.2 Removing the Memory Controller PCB 11-24
11.5.15 Duplexing Driver PCB 11-25
11.5.15.1 Before Removing the Duplex Driver PCB 11-25
11.5.15.2 Removing the Duplex Driver PCB 11-25
11.5.16 Low-voltage Power Supply PCB 11-25
11.5.16.1 Before Removing the Low-Voltage Power Supply PCB 11-25
11.5.16.2 Removing the Low Voltage Power Supply PCB 11-25
11.5.17 High-voltage Power Supply PCB 11-26
11.5.17.1 Before Removing the High Voltage Power Supply PCB 11-26
11.5.17.2 Removing the High Voltage Power Supply PCB 11-27
11.5.18 Off Hook PCB 11-27
11.5.18.1 Before Removing the Off Hook PCB 11-27
11.5.18.2 Removing the Off Hook PCB 11-27
11.5.19 Cooling Fan 11-27
11.5.19.1 Before Removing the Cooling Fan 11-27
11.5.19.2 Removing the Cooling Fan 11-27
11.5.20 Duplex Fan 11-28
11.5.20.1 Before Removing the Duplex Fan 11-28
11.5.20.2 Removing the Duplex Fan 11-28

11.1 DC Controller

11.1.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The CPU in the DC controller PCB controls the operational sequence of the machine.
1) When the power switch of the machine is turned ON, DC power is supplied from the low-voltage power PCB to the DC controller PCB.
2) The CPU in the DC controller PCB starts to control the printer operation.
3) The DC controller receives a print command and image data from the main controller.
4) When the machine is placed in standby, the CPU sends signals to drive each load, such as laser diode, motors, and solenoids, etc.



F-11-1

11.1.2 Operation of Each Block

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

CPU (IC1001)
The CPU is a 16-bit single-chip processor with built-in ROM and RAM.
It controls the following printer operation according to the control program stored in the ROM.
- Sequence control of the printer engine
- Control of the ASIC
- Control of the fixing assembly
- Control of solenoid
- Control of sensors/switches
- Control of the fixing control circuit (relay drive)

ASIC (IC1010)
The ASIC (Application Specific IC) is an IC used in an interface such as an IC, memory, and external equipment.
It controls the following printer operation according to the command from the CPU.
- Control of the laser scanner unit
- Communication with the main controller
- Control of the high-voltage power PCB
- Control of motors
- Control of fans
- Write/Read EEPROM
- Control of the memory controller PCB

Motor Driver IC (IC401, IC802, IC803)
The motor driver IC controls each motor according to the command from the CPU or ASIC.

Reset IC (IC1007)
The reset IC monitors +3.3 V voltage, and resets the CPU and ASIC when the power is turned ON.

EEPROM (IC1007)
The EEPROM stores various backup data.

11.1.3 Fan/Motor Control

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine uses nine motors in total for paper feeding and image formation.

T-11-1

Name		Purpose	Type	Fault detection
Motor	Fixing motor (M1)	To drive the pressure roller and delivery roller To drive engagement/disengagement of the developing roller To drive engagement/disengagement of the pressure roller	DC motor	Provided
	Pickup motor (M4)	To drive the pickup roller of the machine	Stepping motor	Not provided
	ETB motor (M5)	To drive the ETB, To drive engagement/disengagement of the transfer roller	DC motor	Provided
	M drum motor (M6)	To drive the developing roller, photosensitive drum, and stirring plate	DC motor	Provided
	C drum motor (M7)			
	Y drum motor (M8)			
	Bk drum motor (M9)			
	Duplex feed motor (M10)	To drive the duplex feed roller	Stepping motor	Not provided
	Reverse motor (M11)	To drive the reverse roller	Stepping motor	Not provided
Fan	Main unit fan (FM1)	To exhaust heat from the inside of the machine	DC motor	Provided
	Duplex fan (FM2)	To exhaust heat from the reverse unit	DC motor	Provided

11.1.4 Drum motor failure detection

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The DC controller determines that a failure occurred in the drum motors (M6 to 9) in any of the following cases. The machine stops operation and displays "E012 (Drum motor error)" on the control panel.
- Drum motor start-up failure
  The interval of the drum motor speed signal is not settled at the specified interval even when 2.5 seconds elapse after start-up of the drum motor.
- Drum motor rotation failure
  After the drum motor speed signal is settled at the specified interval, it becomes out of the specified interval for more than 2 seconds continuously.

11.1.5 ETB motor failure detection

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The DC controller determines that a failure occurred in the ETB motor (M5) in any of the following cases. The machine stops operation and displays "E012 (ETB motor failure)" on the control panel.
- ETB motor start-up failure
  The interval of the ETB motor speed signal is not settled at the specified interval even when 3.5 seconds elapse after start-up of the ETB motor.
- ETB motor rotation failure
  After the ETB motor speed signal is settled at the specified interval, it becomes out of the specified interval for more than 2 seconds continuously.

11.1.6 Fixing motor failure detection

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The DC controller determines that a failure occurred in the fixing motor (M1) in any of the following cases. The machine stops operation and displays "E014 (Fixing motor failure)" on the control panel.
- Fixing motor start-up failure
  The interval of the fixing motor speed signal is not settled at the specified interval even when 2.5 seconds elapse after start-up of the fixing motor.
- Fixing motor rotation failure
  After the fixing motor speed signal is settled at the specified interval, it becomes out of the specified interval for more than 2 seconds continuously.

11.1.7 Main Unit Fan Failure Detection

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The DC controller determines that a failure occurred in the main unit fan (FM1) when receiving the main unit fan lock signal for more than 10 times consecutively. The machine stops operation and displays "E804 (Main unit fan failure)" on the control panel.

11.1.8 Duplex Fan Failure Detection

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The DC controller determines that a failure occurred in the duplex fan (FM2) when receiving the duplex fan lock signal for more than 10 times consecutively. The machine stops operation and displays "E805 (Duplex fan failure)" on the control panel.

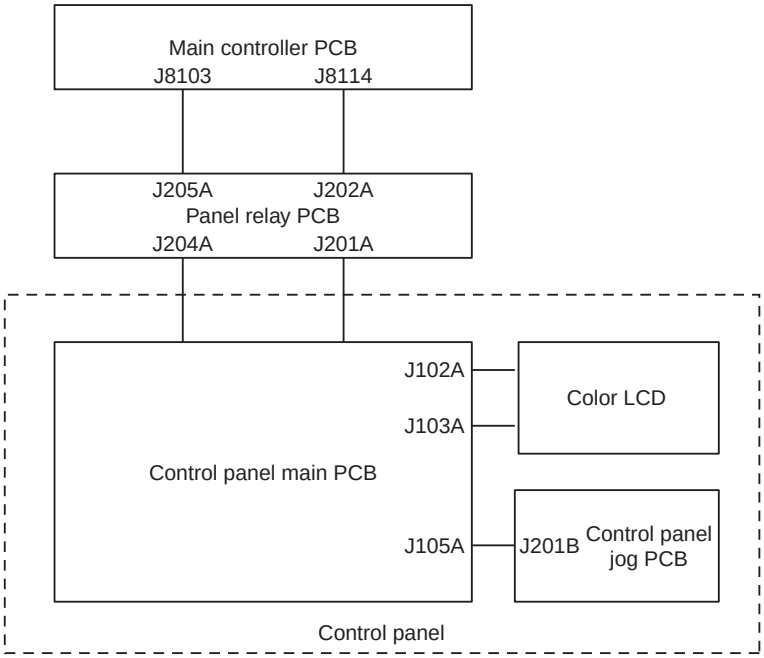
11.2 Control Panel

11.2.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Control panel on the host machine consists of the following PCBs and LCD.
Following is the main function of the control panel.

- LCD display
- Turning ON the control panel LED
- Entry with hard keys, wheel and volume
- Interface control for the USB memory, CF card and SD/MS card



F-11-2

CPU on the main controller PCB transmits the data (display information) to the control panel main PCB according to the programs.
The data is transmitted to color LCD via control panel main PCB.

11.3 Counter

11.3.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i

The machine is equipped with counters that indicate the counts of output according to types of printers.
These counters are indicated in response on a press on the Check key on the control panel, and they operate as follows(as set at time of shipment from the factory):

T-11-2

Model	Counter 1	Counter 2	Counter 3	Counter 4	Counter 5	Counter 6
100V *1 type1 (old system)	total 1	total (black-and-white 1)	copy (full color+mono color,1)	total A (full color+mono color,1)	*	*
	101	**108**	**232**	**149**	**000**	**000**
100V *1 type2 (new sysytem)	total 2	copy (full color+mono color,2)	total A (full color+mono color,2)	copy (black-and-white 2)	total A (black-and-white 2)	*
	102	**231**	**148**	**222**	**133**	**000**
100V *1 type4 (new system)	total 1	total (full color+mono color/ small)	total (black-and-white/ small)	scan (total 1)	*	*
	101	**123**	**113**	**501**	**000**	**000**
120V *2	total 1	total (black-and-white 1)	copy (full color+mono color/ small)	print (full color+mono color/ small)	*	*
	101	**108**	**230**	**322**	**000**	**000**
230V *3	total 1	total (black-and-white 1)	copy+print (full color/small)	total 1 (duplex)	*	*
	101	**108**	**402**	**114**	**000**	**000**
230V *4 type1 (old system)	total (black-and-white/ small)	total (full color+mono color/ small)	scan (total 1)	print (total 1)	*	*
	113	**123**	**501**	**301**	**000**	**000**
230V *5 type2 (new system)	total 1	*	*	*	*	*
	101	**000**	**000**	**000**	**000**	**000**
230V *6	total 1	total (black-and-white 1)	copy (full color+mono color/ small)	print (full color/small)	*	*
	101	**108**	**230**	**322**	**000**	**000**

Guide to Notations
large:large-size paper(longer than 364 mm in feed direction;count increased by 1)
small:small-size paper(364 mm in feed length or shorter)
total:all(C+P;count increased by 1)
duplex:duplexing(in auto duplexing;count increased by 1)

- 3-digit number in the counter column indicates the setting value in the following service mode.
  COPIER>OPTION>USER>COUNTER1 to 6
- From counter 2 to 6 can be changed in service mode COPIER>OPTION>USER>COUNTER

*1: 100V (JAPAN)
*2: 120V (America,Canada,South America 120V;region)
*3: 230V (Singapore,HK,Korea,China,South America 230V;region)
*4: 230V (EU)
*5: 230V (EU)
*6: 230V (Australia,Newzealand)

*: by default,not indicated;may be changed in service mode.

- The counter display type can be switched by executing COPIER>OPTION>USER>CNT-SW in service mode.
  0: old sysytem (Type1) Default
  1: new sysytem (Type2)
  2: new system (Type3)
  3: new system (Type4)

11.3.2 Overview

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine is equipped with counters that indicate the counts of output according to types of printers.
These counters are indicated in response to a press on the Check key on the control panel, and they operate as follows (as set at time of shipment from the factory):

T-11-3

Model	Counter 1	Counter 2	Counter 3	Counter 4	Counter 5	Counter 6
120V *1	total 1	total (black-and-white 1)	copy (full color/small)	print (full color/small)	*	*
	101	**108**	**230**	**322**	**000**	**000**
230V *2	total 1	total (black-and-white 1)	copy+print (full color/sumall)	total 1 (duplex)	*	*
	101	**108**	**402**	**114**	**000**	**000**
230V *3 type1 (old system)	total (black-and-white/small)	total (full color+ mono color/ small)	scan (total 1)	print (total 1)	*	*
	113	**123**	**501**	**301**	**000**	**000**
230V *3 type2 (new system)	total 1	*	*	*	*	*
	101	**000**	**000**	**000**	**000**	**000**
230V *4	total 1	total (black-and-white 1)	copy (full color+ mono color/ small)	print (full color+ mono color/ small)	*	*
	101	**108**	**230**	**322**	**000**	**000**

Guide to Notations
large: large-size paper (longer than 364 mm in feed direction; count increased by 1).
small: small-size paper (364 mm in feed length or shorter).
total: all (C+P; count increased by 1).
duplex: duplexing (in auto duplexing; count increased by 1).

- 3-digit number in the counter column indicates the setting value in the following service mode.
  COPIER> OPTION> USER> COUNTER1 to 6
- From counter 2 to 6 can be changed in service mode COPIER> OPTION> USER> COUNTER

*1: 120V (America, Canada, South America 120V;region)
*2: 230V (Singapore, Korea, China, South America 230V;region)
*3: 230V (EU)
*4: 230V (Australia, Newzealand)

*: by default, not indicated; may be changed in service mode.

- The counter display type can be switched by executing
  COPIER> OPTION> USER> CNT-SW in service mode
  0:old system(Type1) Default
  1:new system(Type2)

11.3.3 Timing of Increasing the Count

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The machine increases the count depending on the selected mode (single-sided, double-sided).

1. Single-Sided Print, 2nd Side of a Double-Sided Print
In the case of a single-sided print or the 2nd side of a double-sided print, the machine increase the count when the trailing edge of paper is discharged outside the machine, as indicated by the output of the delivery sensor (SR715).

2. 1st Side of a Double-Sided Print
The machine increases the count when the pre-registration sensor (SR708) goes on, assuming that the printing on the 1st side is over.

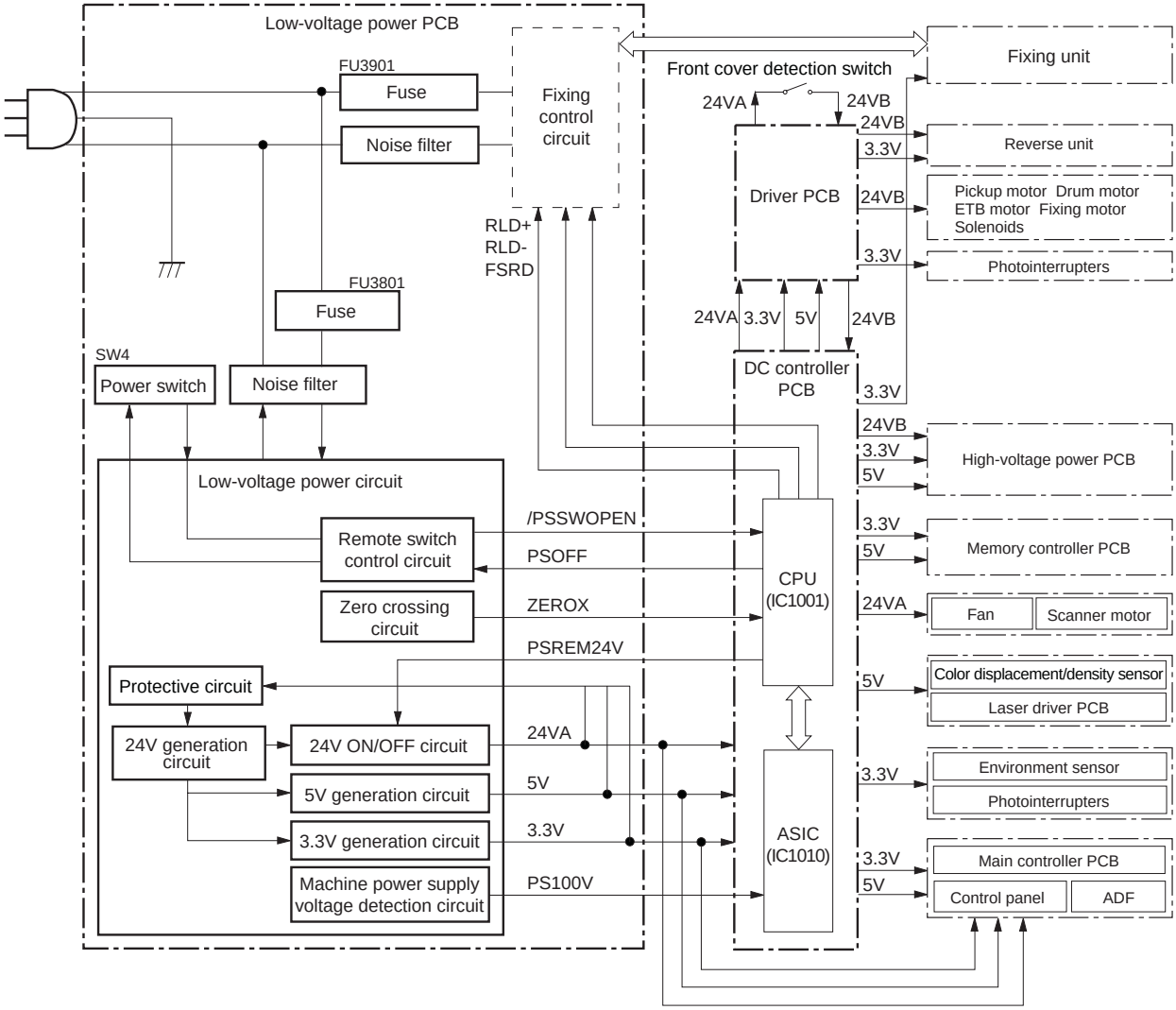
11.4 Power Supply

11.4.1 Power Supply

11.4.1.1 Low-voltage Power Unit

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The low-voltage power PCB is to convert AC into DC covering the DC loads.



F-11-3

The low-voltage power PCB is partially activated as soon as plugged in the electrical outlet. When turning ON the power switch (SW4), whole low-voltage power supply works.
The AC power is then converted into +24V, +5V and +3.3V covering each of machine DC loads. The following are the main loads for each power.

+24V:
Main controller PCB, high-voltage power PCB, Motors, solenoids, fans, reverse unit, and ADF
+5V:
Main controller PCB, driver PCB, laser driver PCB, high-voltage power PCB, memory controller PCB, color displacement/density sensor, and control panel
+3.3V:
DC controller PCB, main controller PCB, driver PCB, high-voltage power PCB, memory controller PCB, sensor (photo interrupter), environment sensor, fixing unit, control panel, reverse unit, and ADF

11.4.2 Protection Function

11.4.2.1 Protective Function

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The low-voltage power circuit has protective function against overcurrent and overvoltage. Once there flows an excessive current accidentally to the load side for some trouble such as a short-circuit problem, or overvoltage occurs, it automatically cuts off the output voltage to prevent failures in the low-voltage power circuit. In case that no DC voltage is supplied from the low-voltage power circuit, turn off the power switch (SW4) anyway. Do not turn on the power again as far as the root cause is not found at the load side since the protective function may still work.
There are two fuses, FU3801 and FU3901, in the circuit for other protective function. The fuses blow and cut off the AC power, once AC overcurrent flows into the AC line.

To recover the low-voltage power circuit in case of functioning the protection, turn the power OFF (by switching off or unplugging) and leave the printer off for 15 seconds or longer, then turn the printer ON again.

11.4.2.2 Safety

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

For the safety reason for the users and the service technicians, the +24V DC line is intentionally divided into two ways, +24VA and +24VB.
The +24VA is supplied from the DC controller PCB all the time, whereas the power supply of the +24VB stops when the front cover detection switch (SW1) is cut off.
The high-voltage power PCB and motors are supplied with the +24VB. They stop when the front cover or the reverse assembly cover is opened. This is to protect the users and the service technicians from an electric shock or injury to their hands.
The +24VB also functions as the front cover detection signal. The CPU determines the front cover or the reverse assembly cover open when the +24VB supply stops.

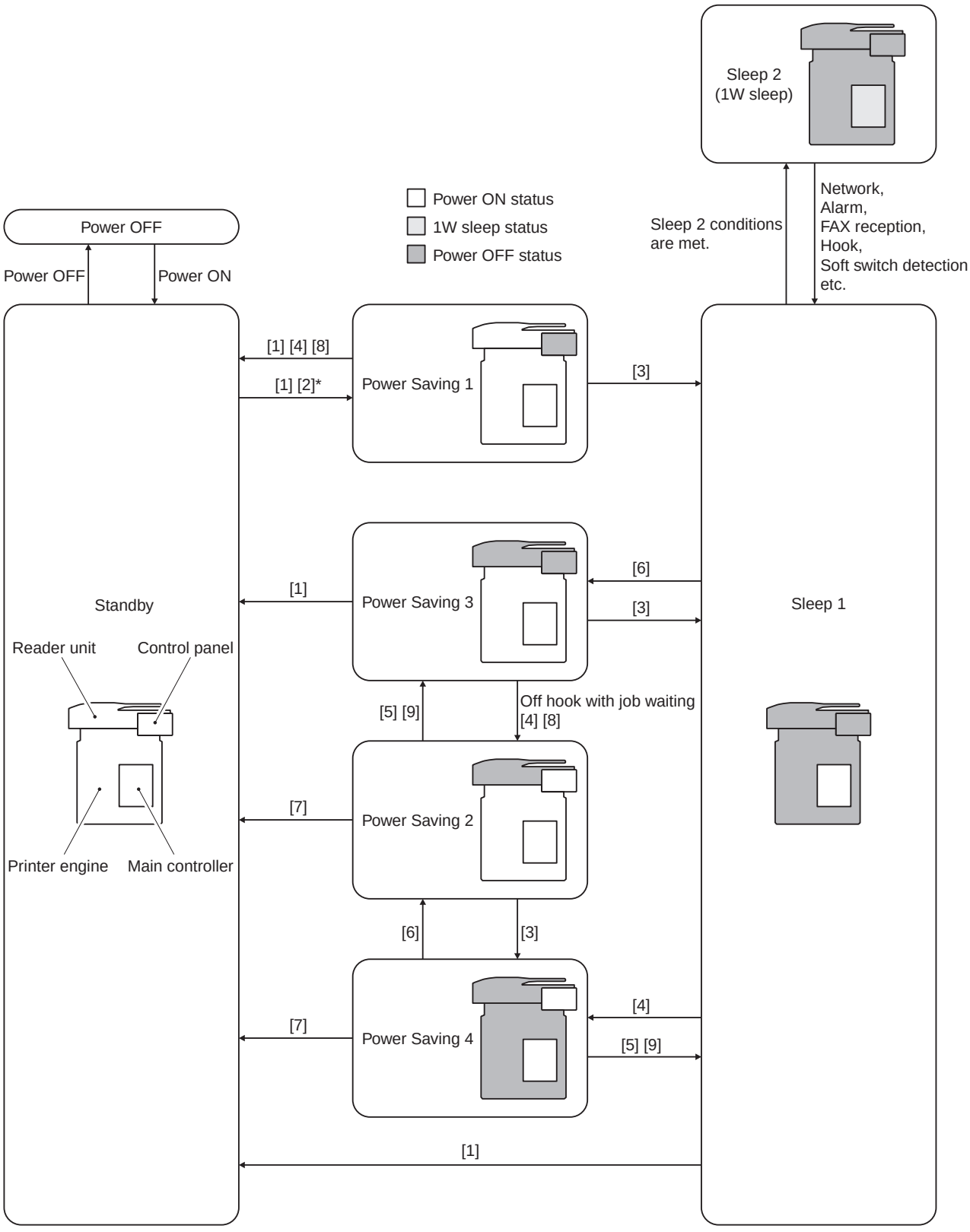
11.4.3 Energy-Saving Function

11.4.3.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-11-4

Power control status	Mode	Status
Standby	Standby 1	Normal standby status
	Standby 2	Half of the LCD backlight is turned on.
Power Saving	Power Saving 1	Only the LCD backlight is turned off.
	Power Saving 2-1	The reader unit is turned off.
	Power Saving 2-2	Half of the LCD backlight is turned on, and the reader unit is turned off.
	Power Saving 3	The LCD backlight and reader unit are turned off.
	Power Saving 4-1	The printer engine and reader unit are turned off.
	Power Saving 4-2	Half of the LCD backlight is turned on, and the printer engine and reader unit are turned off.
Sleep	Sleep 1	Only the CPU of the main controller is operating.
	Sleep 2	1W sleep The CPU of the main controller is also stopped. The controller software recovers when interrupted by various types of operation.



F-11-4

[1] The software switch is pressed. [2] Auto sleep time has elapsed. [3] No job

[4] Off-hook is detected. [5] On-hook is detected. [6] A job occurs.

[7] The screen switches. (Entry by keys in the control panel) [8] An alert occurs. [9] The machine recovers from an alert.

*: On-hook status only. The machine does not enter the power saving status even if "the software switch is pressed" or "auto sleep time has elapsed" in an on-hook status.

Even if an error such as "absence of paper" occurs in the Standby 2 status, the machine does not enter the Standby 1 status.

11.5 Parts Replacement Procedure

11.5.1 Front Cover

11.5.1.1 Before Removing the Front Cover Unit

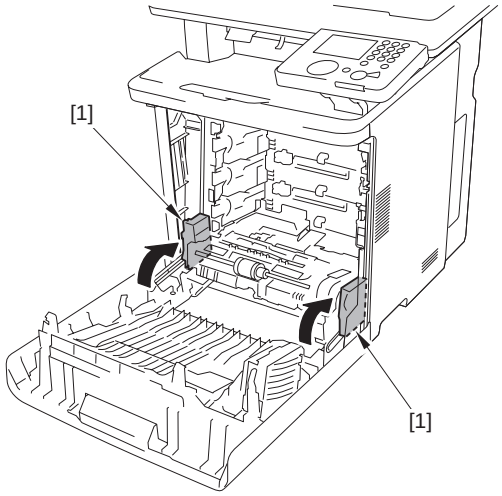
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
3) Remove the left cover.(page 11-14) Reference [Removing the Left Cover]
4) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]

11.5.1.2 Removing the Front Cover Unit

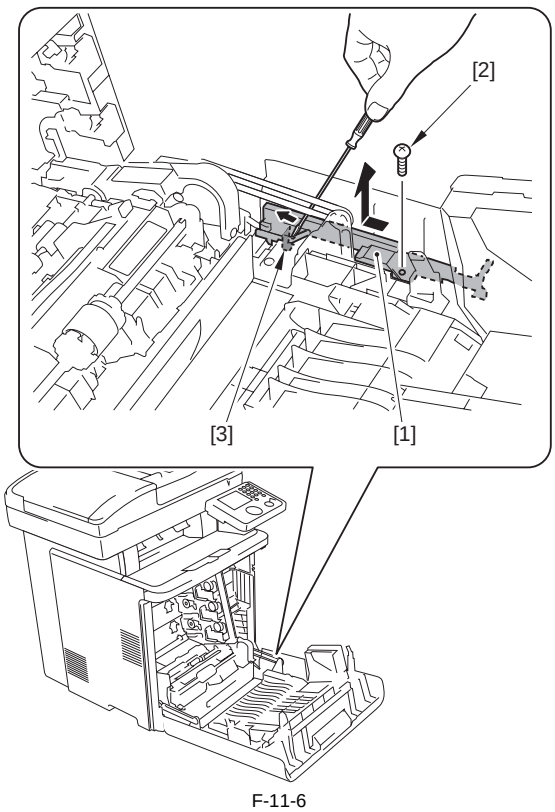
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Turn the 2 drawer connectors [1] up.



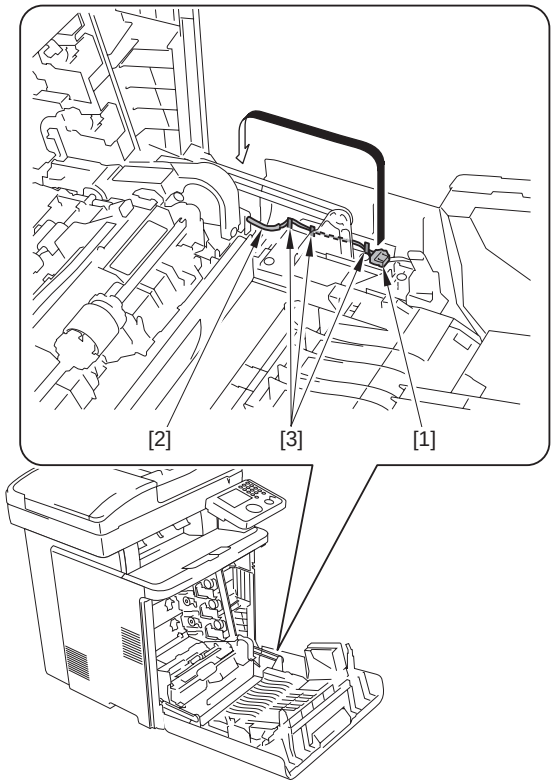
F-11-5

2) Remove the cable cover [1].
- 1 screw [2]
- 1 claw [3]



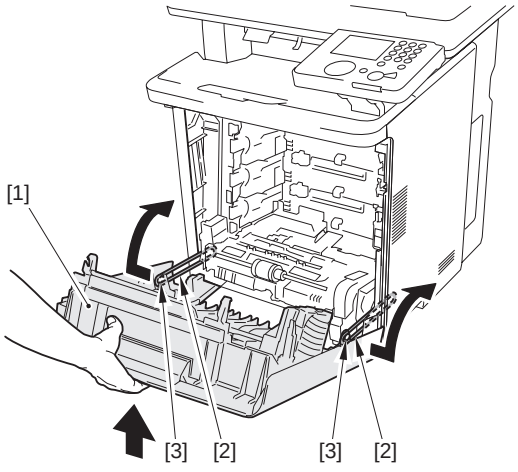
F-11-6

3) Remove the relay connector [1] and the harness [2] from the harness guide [3].



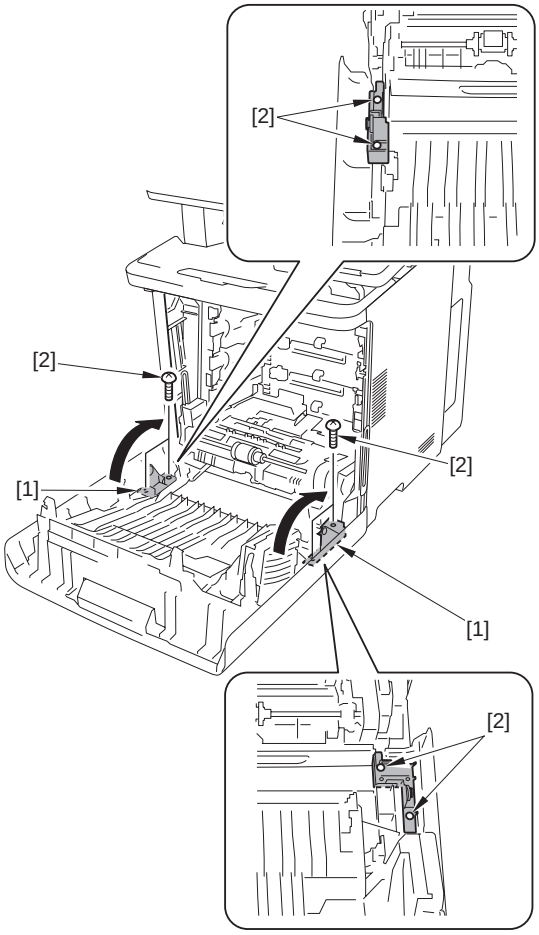
F-11-7

4) While lifting the front cover unit [1], remove the 2 links [2] from the 2 shafts [3] and raise it in the direction of the arrow.



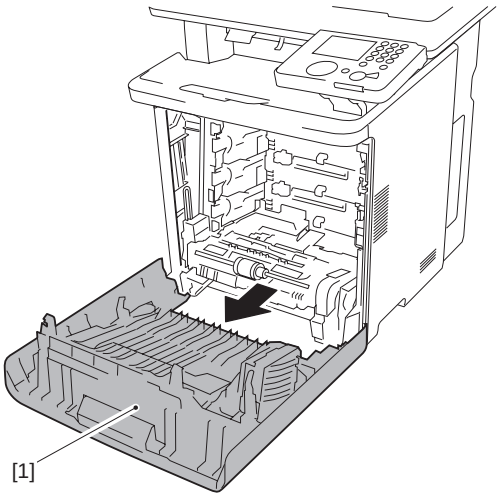
F-11-8

5) Turn the 2 hinges [1] up in the direction of the arrow.
- 4 screws (binding) [2]



F-11-9

6) Remove the front cover unit [1].



F-11-10

11.5.2 Front Upper Cover 1

11.5.2.1 Before Removing Front upper Cover 1

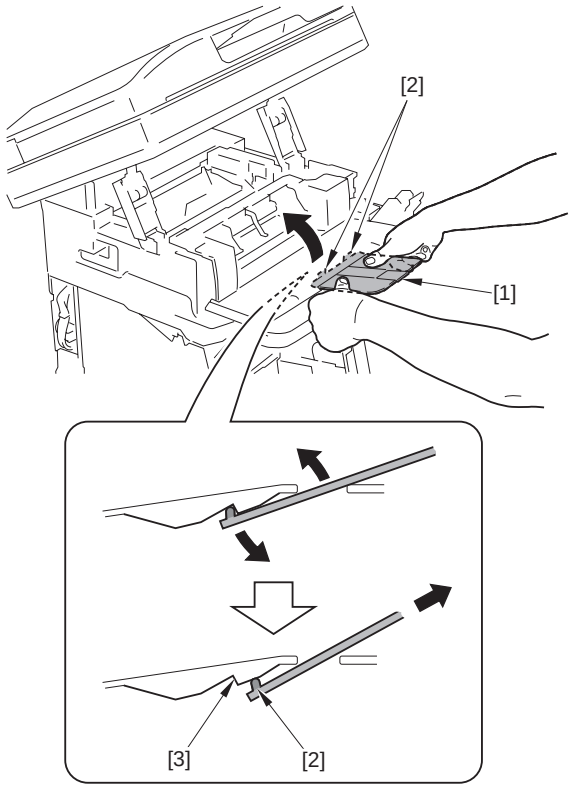
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
3) Remove the left cover.(page 11-14) Reference [Removing the Left Cover]
4) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]
5) Remove the control panel unit.(page 11-22) Reference [Removing the Control Panel Unit]

11.5.2.2 Removing Front Upper Cover 1

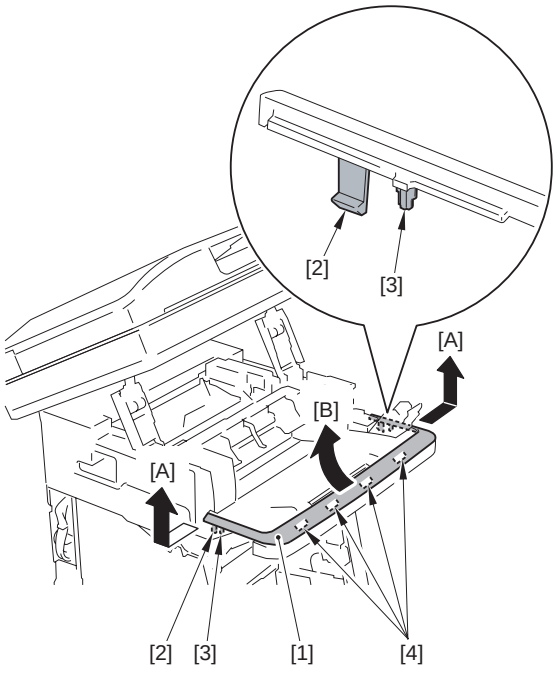
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Pull the delivery tray [1] out.
2) Move the delivery tray [1] in the direction of the arrow, and release the 2 projections [2] from the 2 claws [3] of the delivery tray cover to remove the delivery tray.



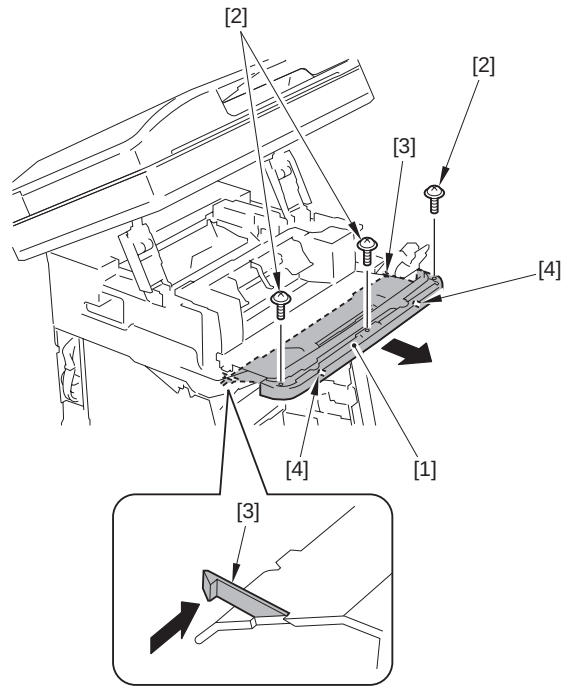
F-11-11

3) Remove the 2 claws [2] and the 2 bosses [3] at both sides of front upper cover 2 [1] in the direction of the arrow [A].
4) Move front upper cover 2 [1] in the direction of the arrow [B] and release the 4 claws [4] to remove front upper cover 2.



F-11-12

5) Remove front upper cover 1 [1].
- 3 screws [2]
- 2 claws [3]
- 2 bosses [4]



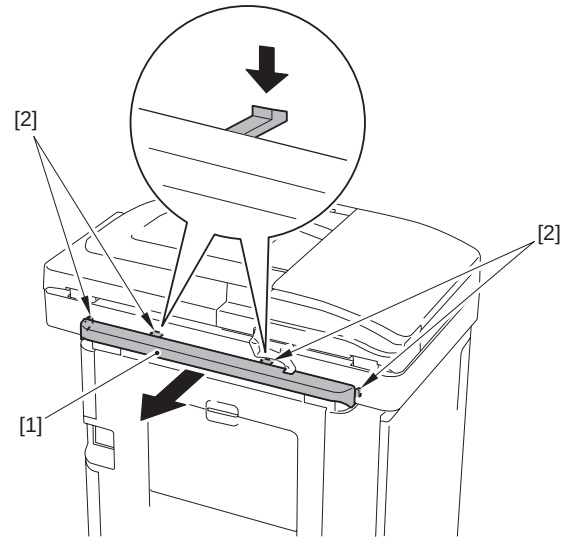
F-11-13

11.5.3 Rear Cover

11.5.3.1 Removing the Rear Cover Unit

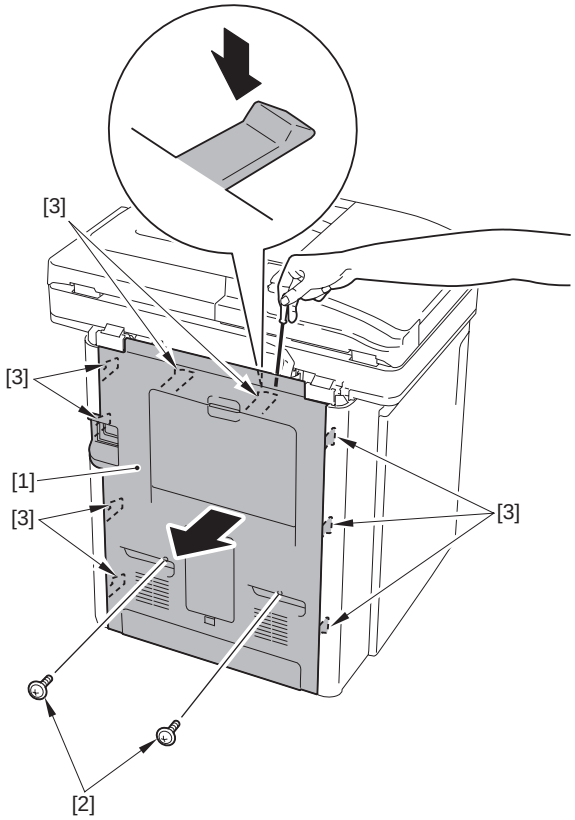
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the reader hinge cover [1].
   - 4 claws [2]



F-11-14

2) Remove the rear cover unit [1].
   - 2 screws [2]
   - 9 claws [3]



F-11-15

11.5.4 Right Cover

11.5.4.1 Before Removing the Right Cover

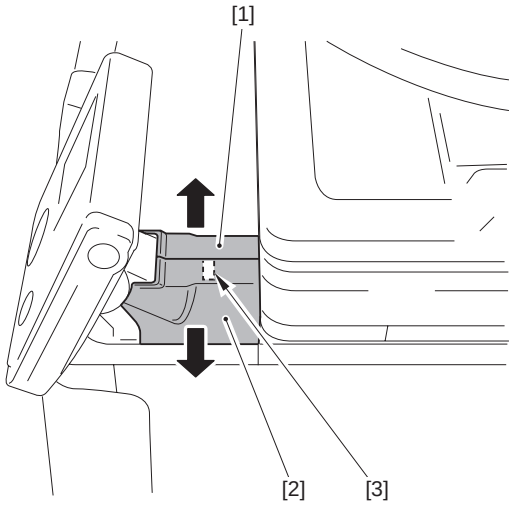
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12)Reference [Removing the Rear Cover Unit]

11.5.4.2 Removing the Right Cover

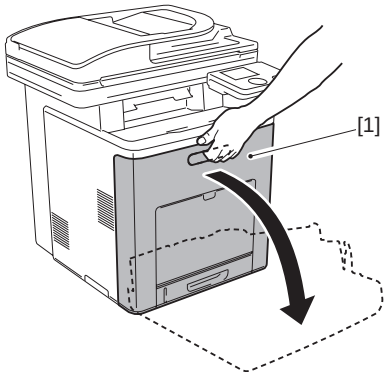
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the panel stand left cover [1] and the panel stand right cover [2].
   - 1 claw [3]



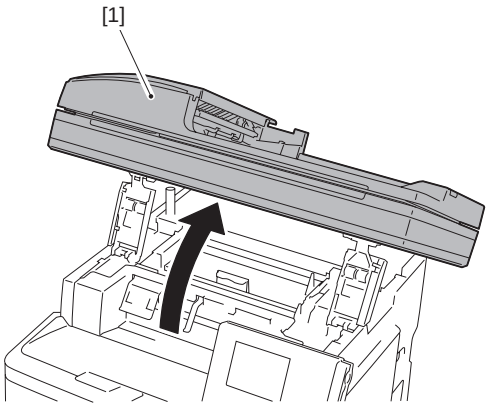
F-11-16

2) Open the front cover [1].



F-11-17

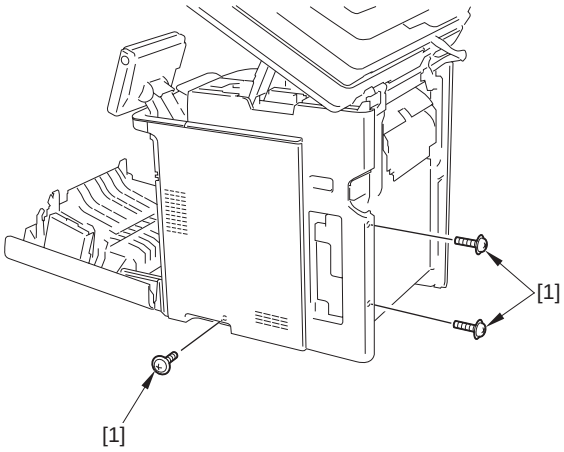
3) Open the ADF unit + reader unit [1].



F-11-18

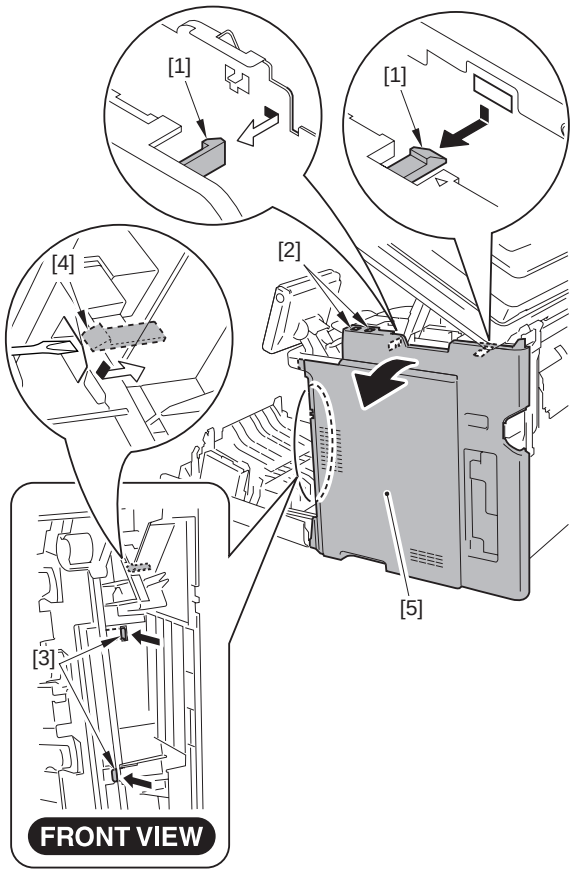
Points to note at work
Be sure not to close the ADF unit + reader unit hastily. If closing the ADF unit + reader unit hastily, the impact can cause damage.
Also be careful not to get your hands caught between the ADF unit + reader unit and the host machine.

4) Remove the 3 screws [1].



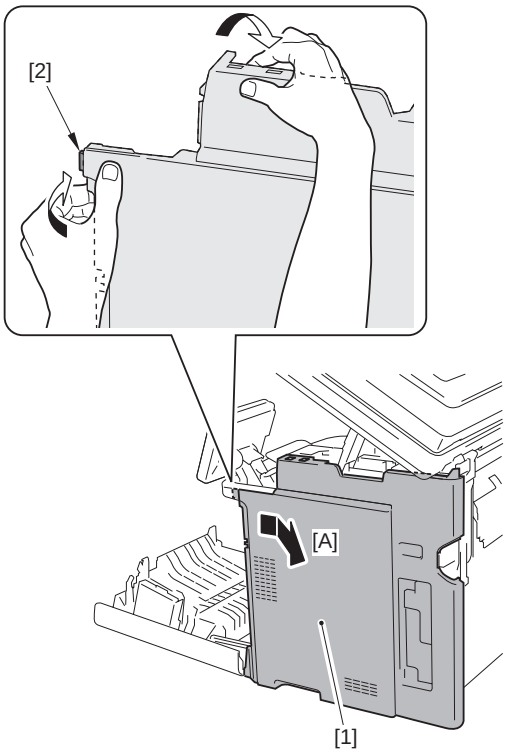
F-11-19

5) Remove the 2 claws [1], the 2 hooks [2], the 2 claws [3], the claw [4] in order, and then move the right cover [5] in the direction of the arrow.



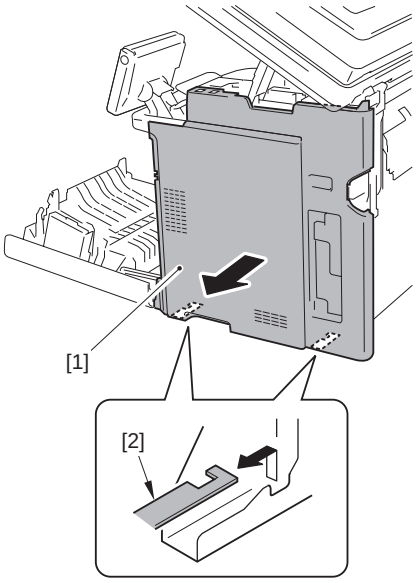
F-11-20

6) Bend the right cover [1] and remove the protrusion [2] in the direction of the arrow [A].



F-11-21

7) Move the right cover [1] in the direction of the arrow and release the 2 claws [2] to remove.



F-11-22

11.5.5 Left Cover

11.5.5.1 Before Removing the Left Cover

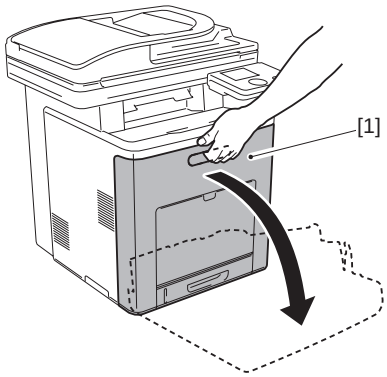
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]

11.5.5.2 Removing the Left Cover

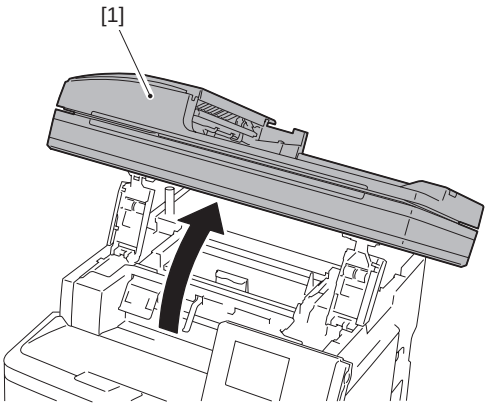
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Open the front cover [1].



F-11-23

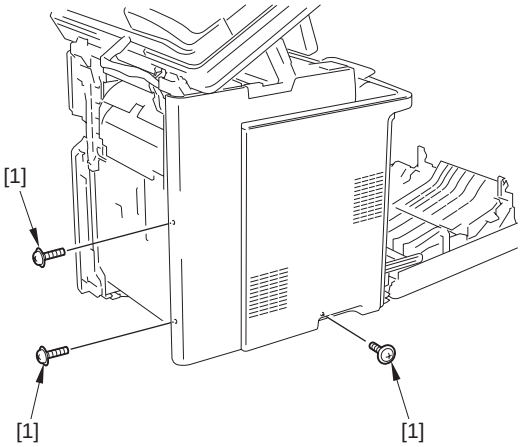
2) Open the ADF unit + reader unit [1].



F-11-24

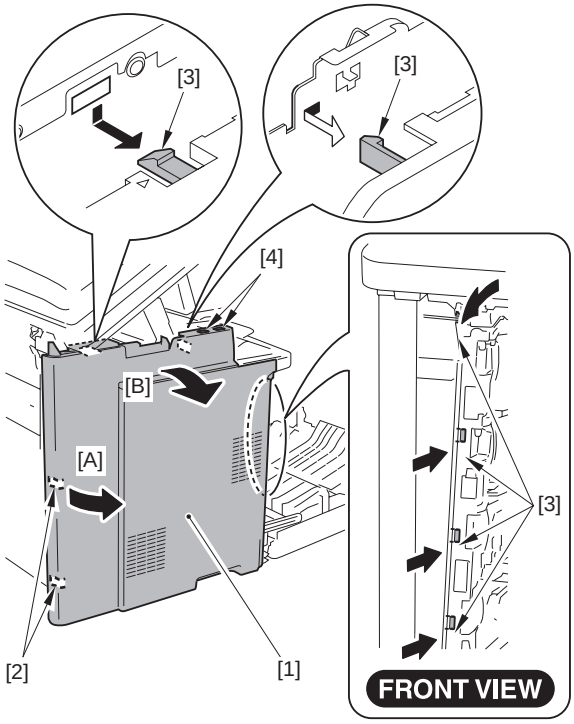
Points to note at work
Be sure not to close the ADF unit + reader unit hastily. If closing the ADF unit + reader unit hastily, the impact can cause damage.
Also be careful not to get your hands caught between the ADF unit + reader unit and the host machine.

3) Remove the 3 screws [1].



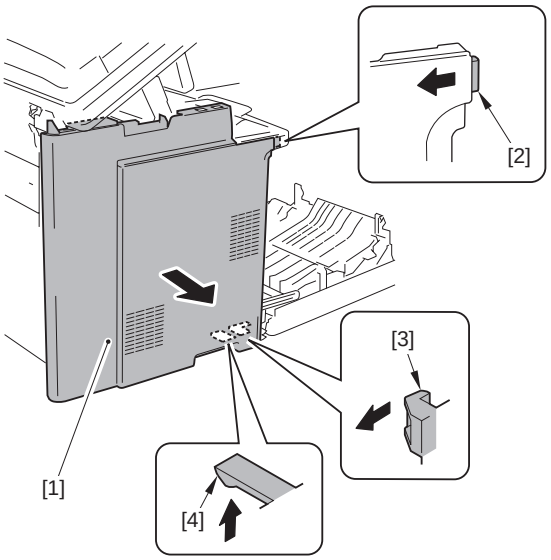
F-11-25

4) Remove the 2 hooks [2] of the left cover [1] in the direction of the arrow [A].
5) Remove the 6 claws [3] and the 2 hooks [4] and move the left cover [1] in the direction of the arrow [B].



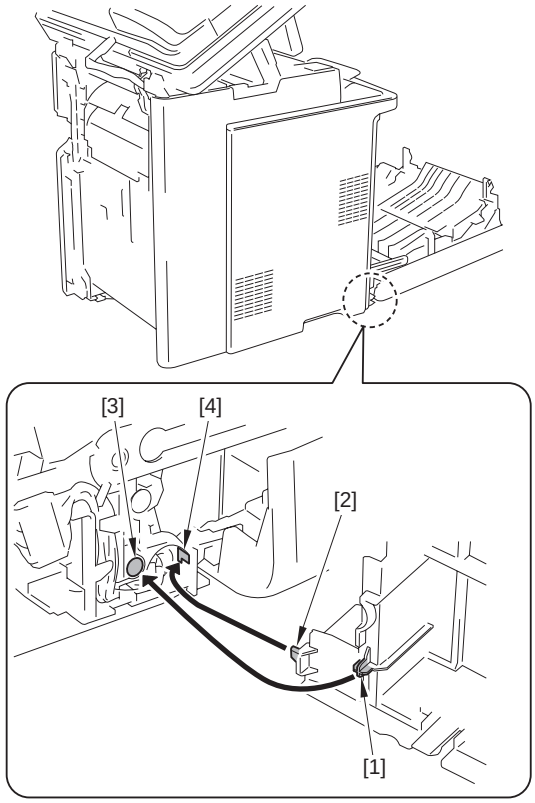
F-11-26

6) Move the left cover [1] in the direction of the arrow, and release the projection [2], the projection [3] and the claw [4] to remove.



F-11-27

Point to Note at Installation
Be sure to install the left cover by fitting the boss [1] and the projection [2] of the left cover with the harness guide hole [3] and the groove [4] of the host machine.



11.5.6 Delivery Tray Cover

11.5.6.1 Before Removing the Delivery Tray Cover

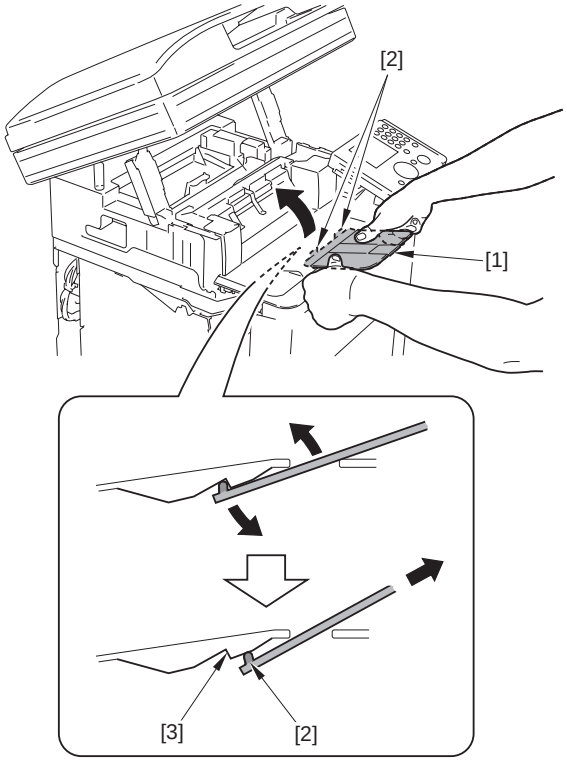
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]
2) Remove the fixing assembly.(page 10-8)Reference [Removing the Fixing Assembly]
3) Remove the rear cover unit.(page 11-12)Reference [Removing the Rear Cover Unit]
4) Remove the left cover.(page 11-14)Reference [Removing the Left Cover]
5) Remove the right cover.(page 11-12)Reference [Removing the Right Cover]

11.5.6.2 Removing the Delivery Tray Cover

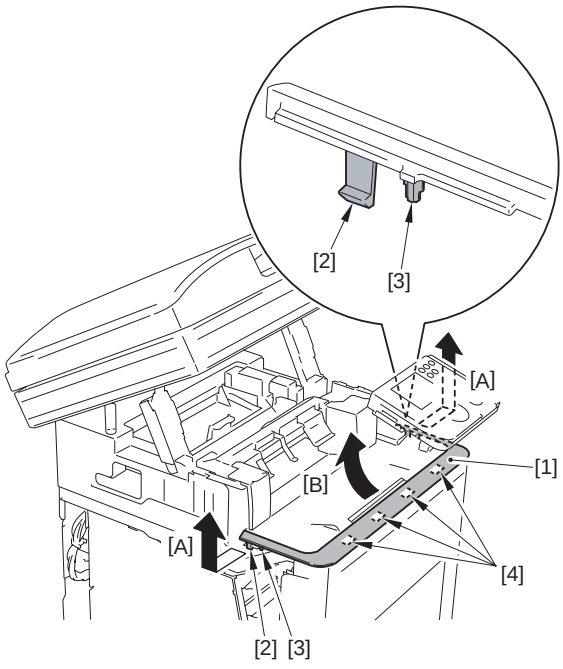
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Pull the delivery tray [1] out.
2) Move the delivery tray [1] in the direction of the arrow and release the 2 projections [2] from the 2 claws [3] of the delivery tray cover to remove.



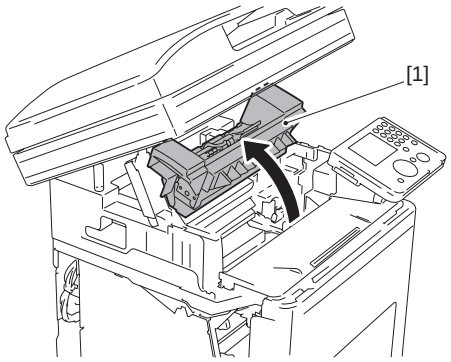
F-11-28

3) Remove the 2 claws [2] and the 2 bosses [3] at both sides of front upper cover 2 to remove them in the direction of the arrow [A].
4) Move front upper cover 2 [1] in the direction of the arrow [B] and release the 4 claws [4] to remove.



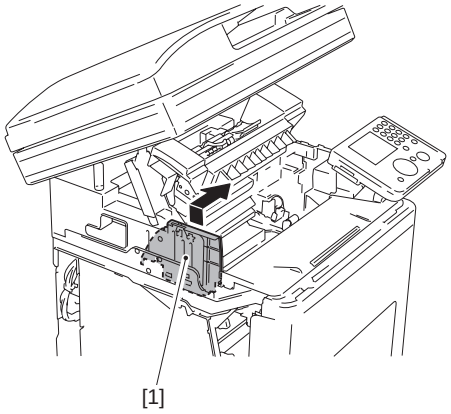
F-11-29

5) Open the delivery cover [1].



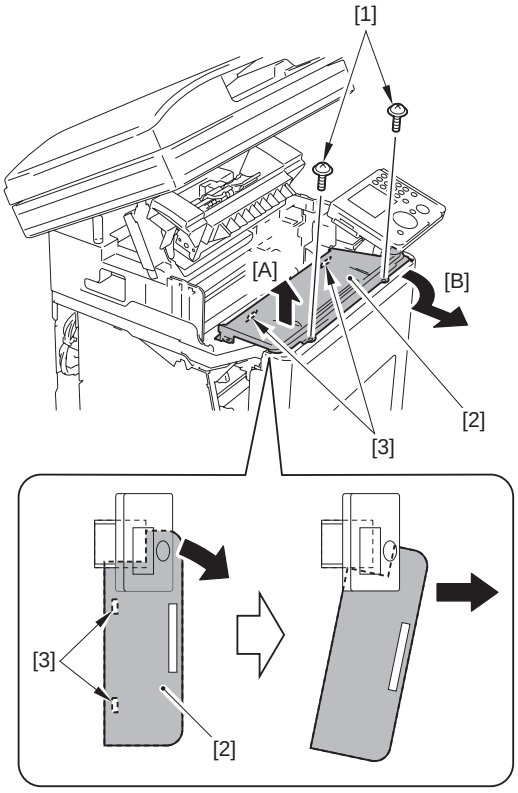
F-11-30

6) Remove the left upper front inner cover [1].



F-11-31

7) Remove the 2 screws [1].
8) Move the delivery tray cover [2] in the order of arrow directions [A] and then [B], and release the 2 claws [3] to remove.



F-11-32

11.5.7 Power Station Cover

11.5.7.1 Before Removing the Electrical Components Cover

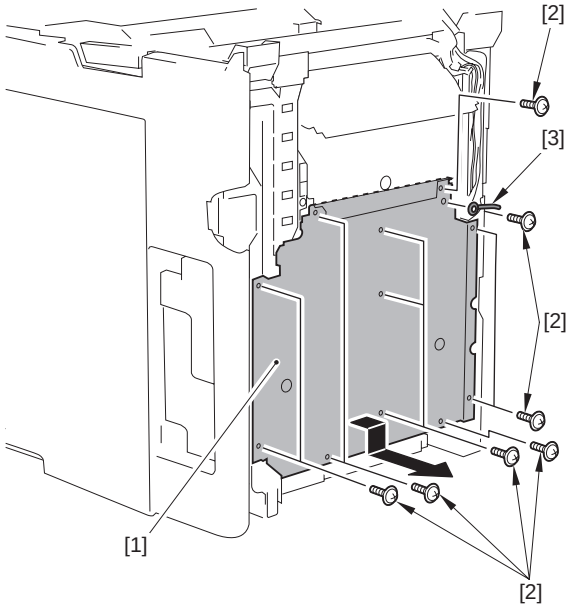
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12)Reference [Removing the Rear Cover Unit]
3) Remove the left cover.(page 11-14)Reference [Removing the Left Cover]

11.5.7.2 Removing the Electrical Components Cover

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the Electrical Components Cover [1].
   - 12 screws [2]
   - 1 terminal [3]



F-11-33

11.5.8 Controller Box

11.5.8.1 Before Removing the Controller Box

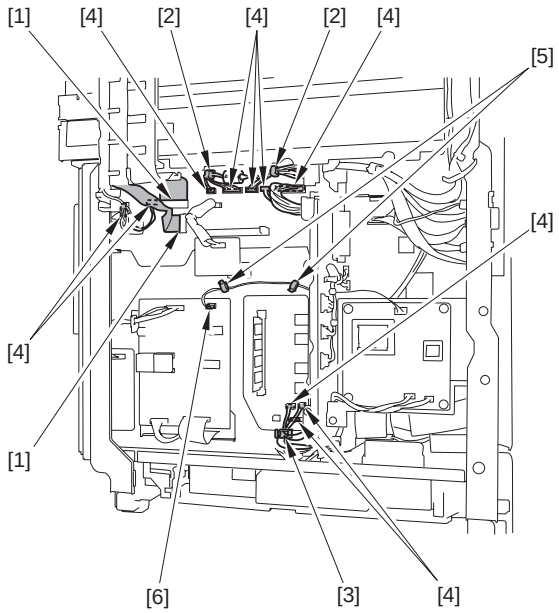
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12)Reference [Removing the Rear Cover Unit]
3) Remove the left cover.(page 11-14)Reference [Removing the Left Cover]
4) Remove the right cover.(page 11-12)Reference [Removing the Right Cover]
5) Remove the Electrical Components Cover.(page 11-16)Reference [Removing the Electrical Components Cover]

11.5.8.2 Removing the Controller Box

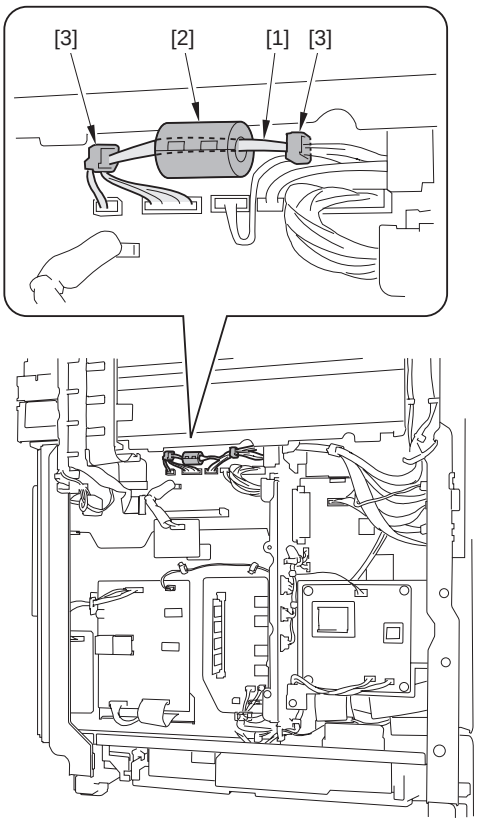
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the following parts.
   - 2 flat cables [1]
   - 2 clamps [2]
   - edge saddle [3]
   - 10 connectors [4]
   - 2 clamps [5] (only of the machine with FAX)
   - connector [6] (only of the machine with FAX)

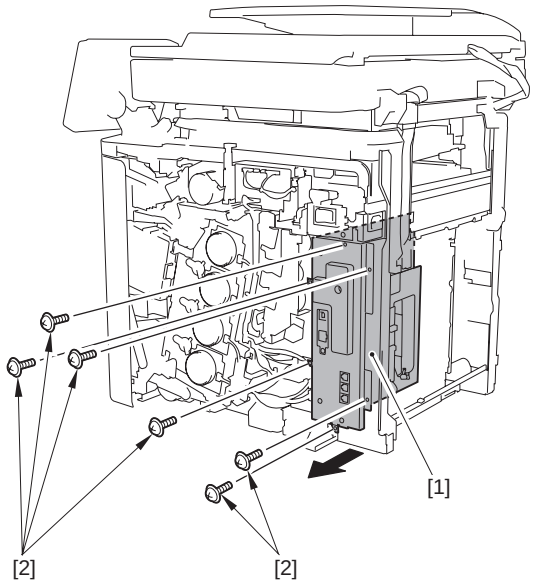


F-11-34

Points to note at installation
Make sure to install the ferrite core [2] attached to the harness [1] between the 2 wire saddles [3].



2) Remove the controller box [1].
- 6 screws [2]



F-11-35

11.5.9 Laser Scanner Cover

11.5.9.1 Before Removing the Laser Scanner Cover

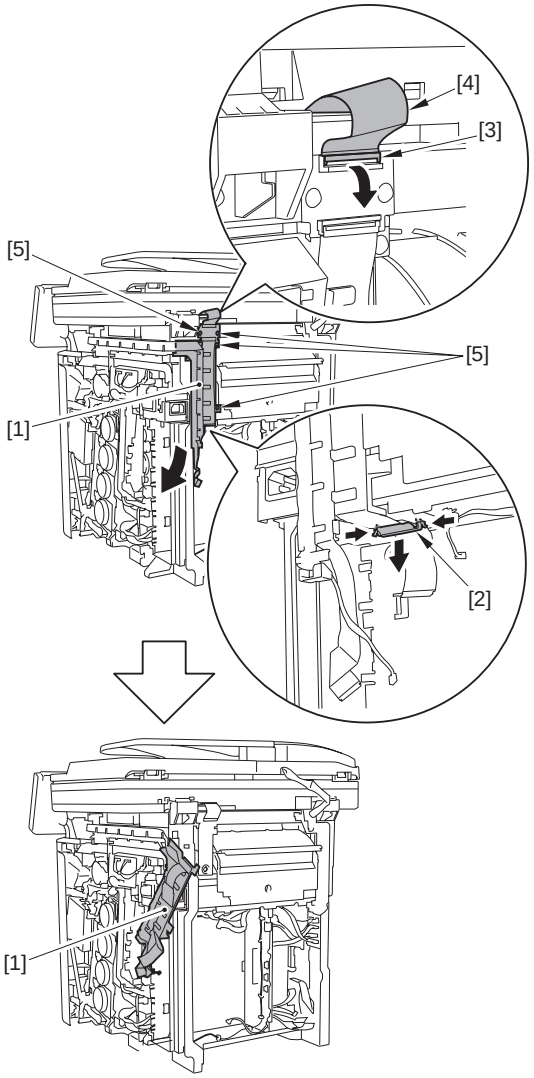
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12)Reference [Removing the Rear Cover Unit]
3) Remove the left cover.(page 11-14)Reference [Removing the Left Cover]
4) Remove the right cover.(page 11-12)Reference [Removing the Right Cover]
5) Remove the Electrical Components Cover.(page 11-16)Reference [Removing the Electrical Components Cover]
6) Remove the Controller Box.(page 11-16)Reference [Removing the Controller Box]
7) Remove the Off Hook PCB. (only of the machine with FAX)(page 11-27)Reference [Removing the Off Hook PCB]
8) Remove the DC Controller PCB.(page 11-24)Reference [Removing the DC Controller PCB]

11.5.9.2 Removing the Laser Scanner Cover

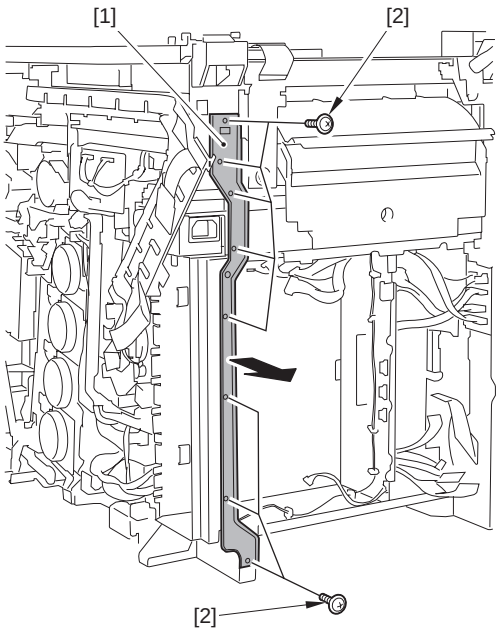
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the harness guide [1].
- 1 cable clip [2]
- 1 cable holder [3]
- 1 flat cable [4]
- 4 screws [5]



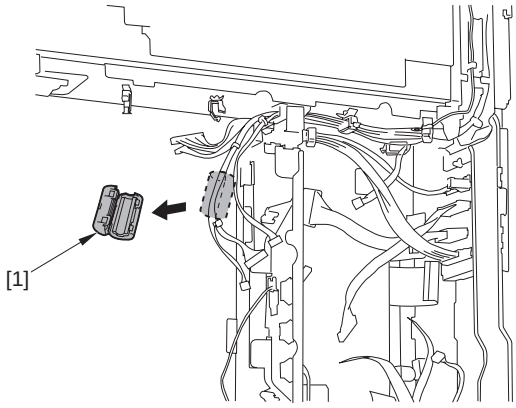
F-11-36

2) Remove the right frame reinforcement plate [1].
- 8 screws [2]



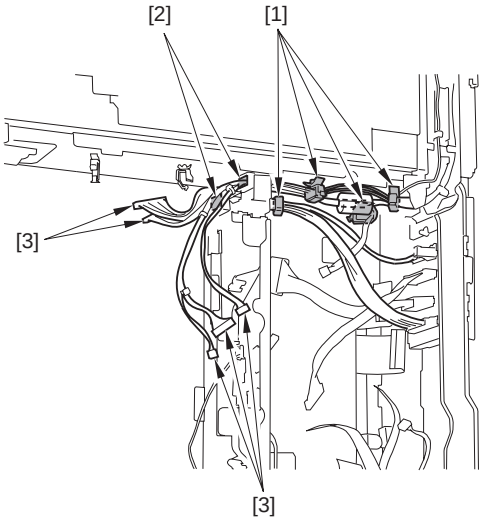
F-11-37

3) Remove the ferrite core [1].



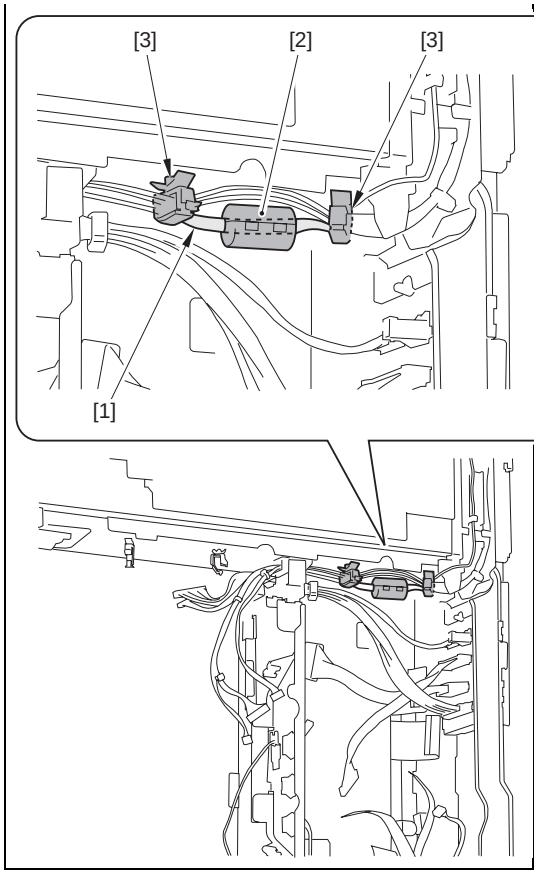
F-11-38

4) Open the 4 wire saddles [1] and free the 5 harnesses [3] from the 2 harness guide mouths [2].

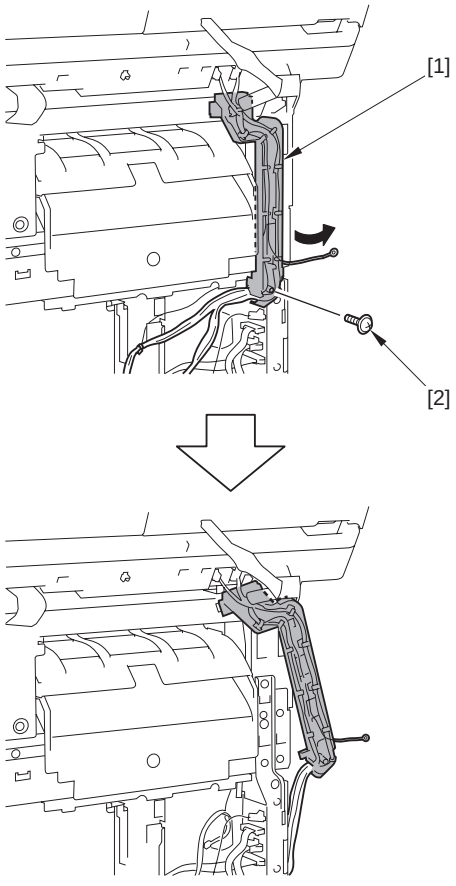


F-11-39

Points to note at installation
Make sure to install the ferrite core [2] attached to the harness [1] between the 2 wire saddles [3].

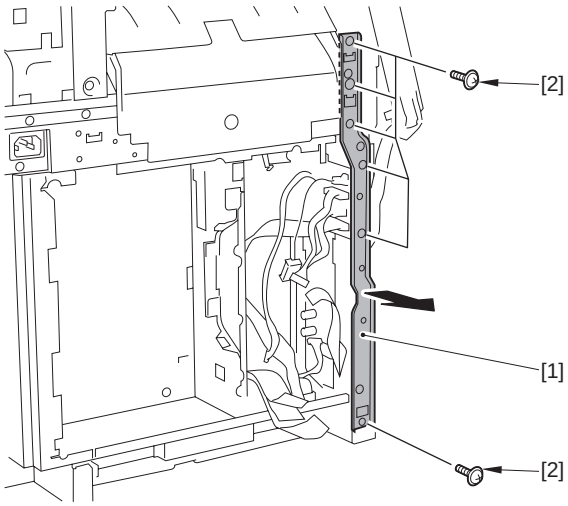


5) Remove the harness guide [1].
- 1 screw [2]



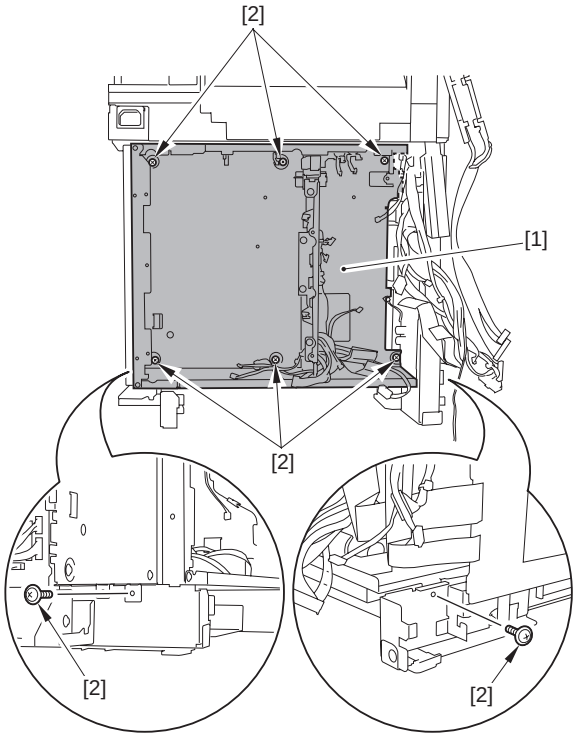
F-11-40

6) Remove the left frame reinforcement plate [1].
- 6 screws [2]



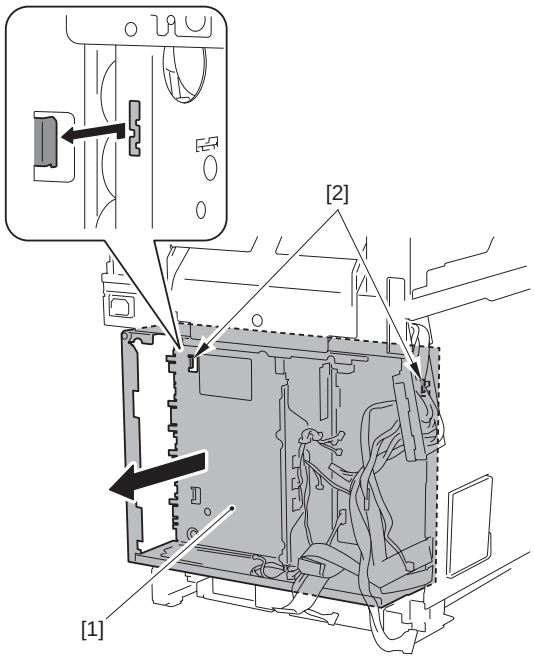
F-11-41

7) Remove the 8 screws [2] from the laser scanner cover [1].



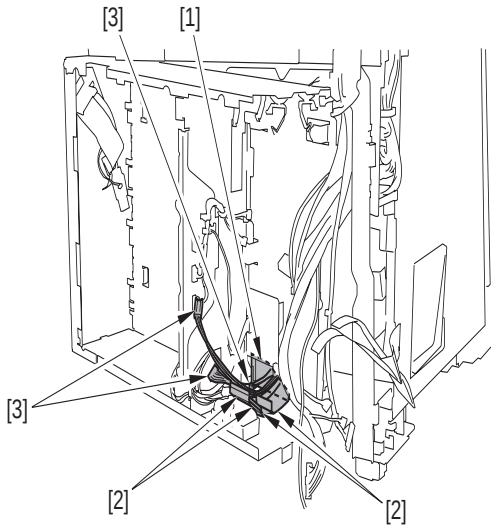
F-11-42

8) Remove the laser scanner cover [1].
- 2 hooks [2]



F-11-43

Point to Note at Installation
When installing the laser scanner cover, be sure to put the 4 flat cables [2] and the 3 harnesses [3] through the hole [1] of the laser scanner cover in advance.



11.5.10 Upper Frame Unit

11.5.10.1 Before Removing the Upper Frame Unit

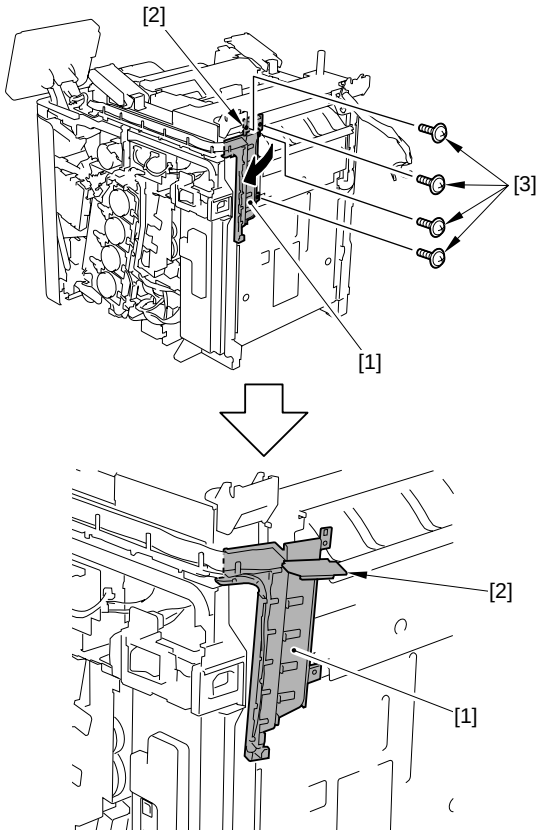
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the fixing assembly.(page 10-8) Reference [Removing the Fixing Assembly]
3) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
4) Remove the ADF Unit + Reader Unit.(page 5-9) Reference [Removing the ADF Unit + Reader Unit]
5) Remove the left cover.(page 11-14) Reference [Removing the Left Cover]
6) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]

11.5.10.2 Removing the Upper Frame Unit

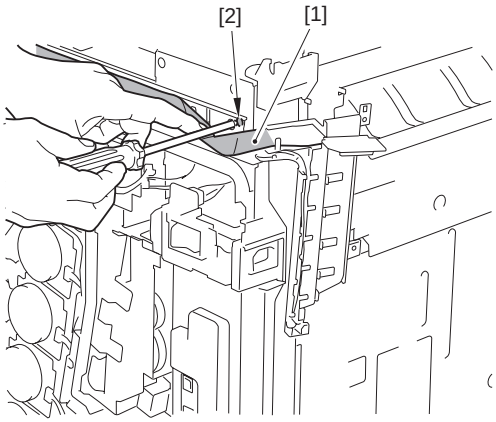
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the harness guide [1] and the CCD Relay PCB [2].
- 4 screws [2]



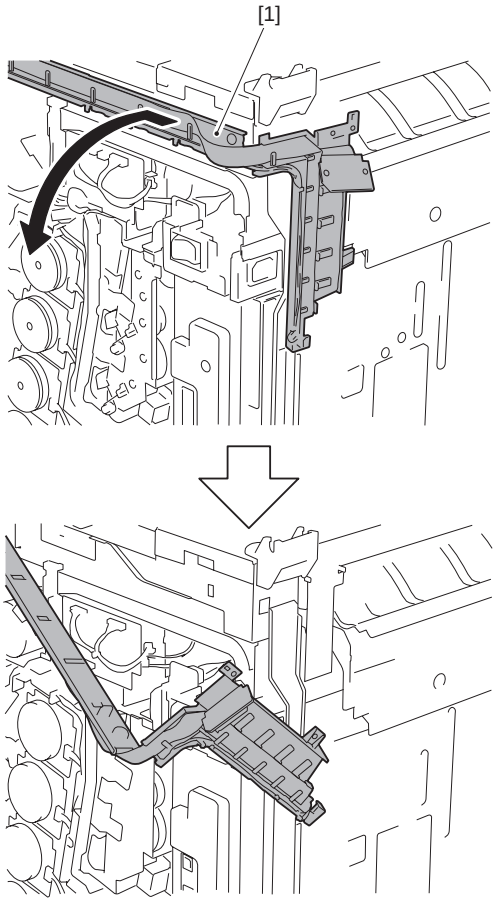
F-11-44

2) Remove the screw [2] on the backside of the flat cable [1].



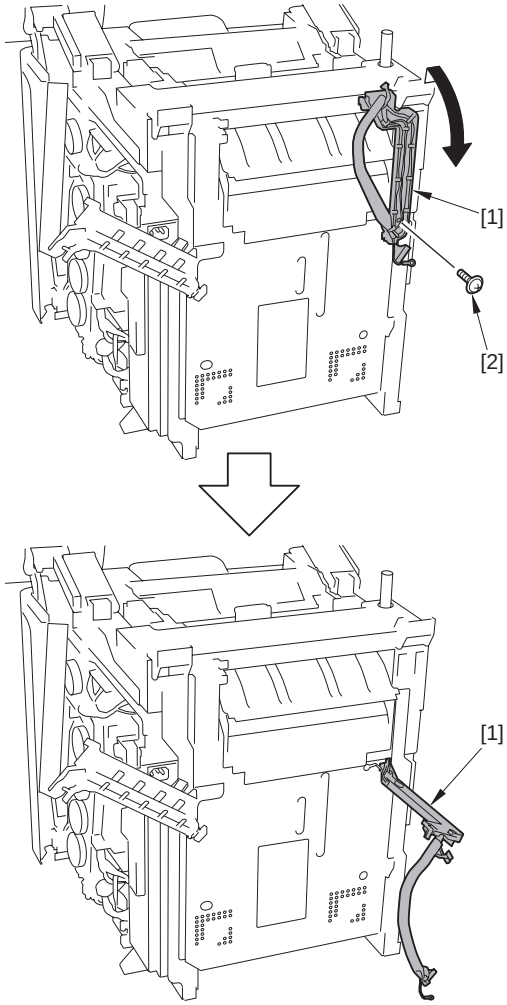
F-11-45

3) Remove the harness guide [1].



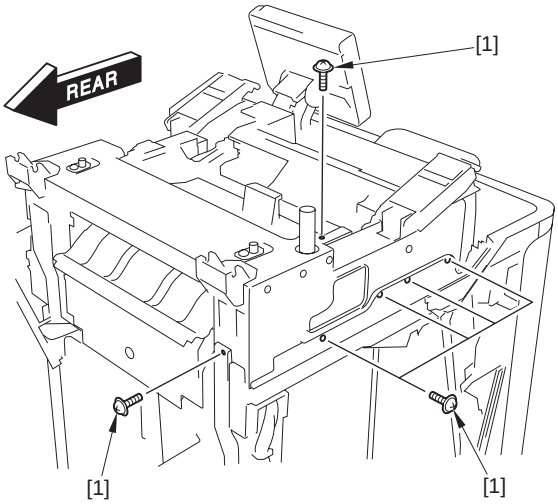
F-11-46

4) Remove the harness guide [1].
- 1 screw [2]



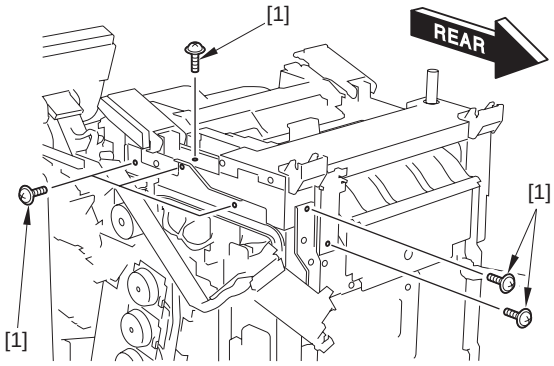
F-11-47

5) Remove the 6 screws [1] (on the left side of the upper frame unit).



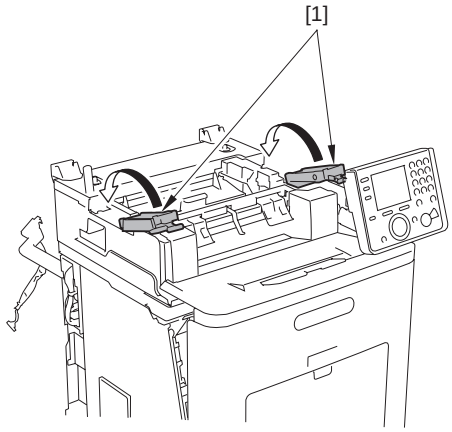
F-11-48

6) Remove the 6 screws [1] (on the right side of the upper frame unit).



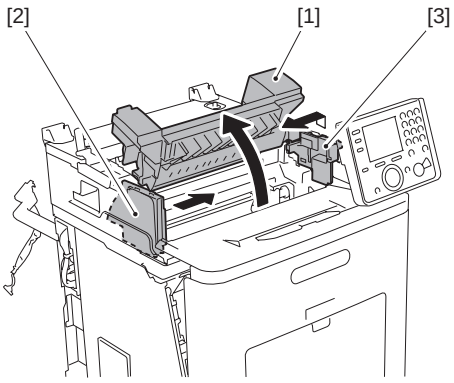
F-11-49

7) Move the 2 reader fixing arms [1] to the rear side.



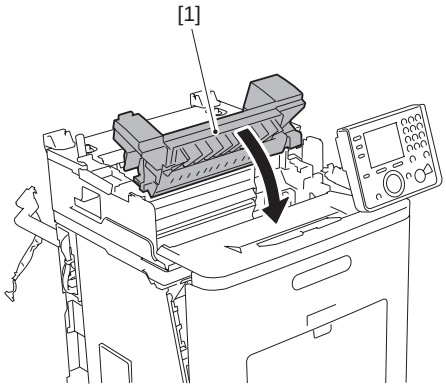
F-11-50

8) Open the fixing delivery cover [1] to remove the left upper front inner cover [2] and the right upper front inner cover [3].



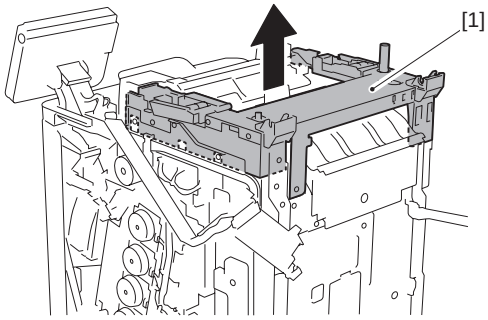
F-11-51

9) Close the fixing delivery cover [1].



F-11-52

10) Remove the upper frame unit [1].



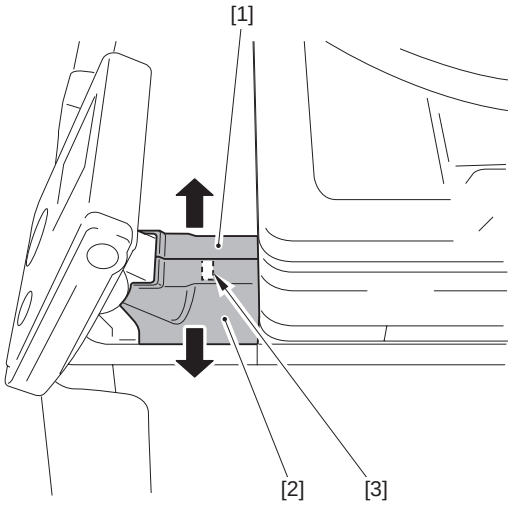
F-11-53

11.5.11 Operation Panel Unit

11.5.11.1 Removing the Control Panel Unit

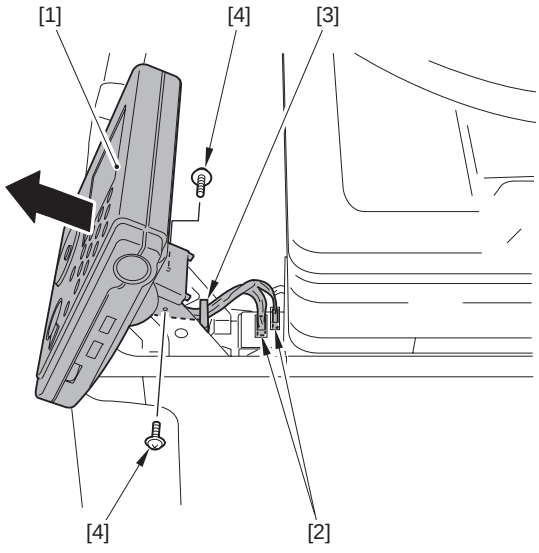
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the panel stand left cover [1] and the panel stand right cover [2].
   - 1 claw [3]



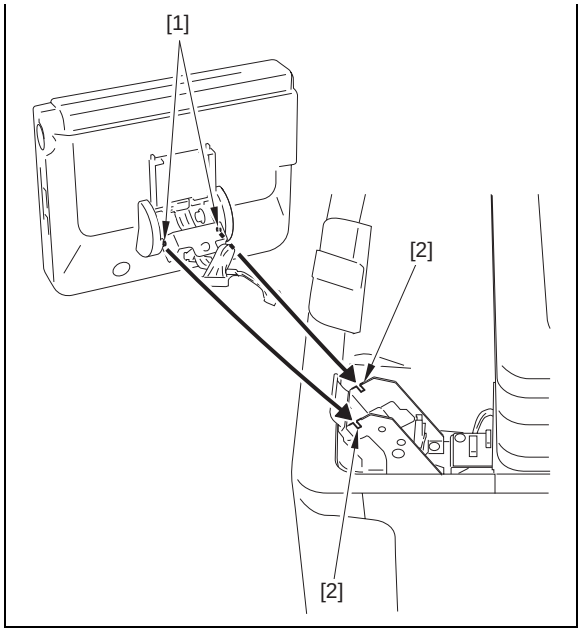
F-11-54

2) Remove the control panel unit [1].
   - 2 connectors [2]
   - 1 clamp [3]
   - 2 screws [4]



F-11-55

Point to Note at Installation
Be sure to fit the 2 bosses [1] of the control panel unit into the 2 grooves [2] of the stand to install.



11.5.11.2 Procedure after Replacing the Control Panel

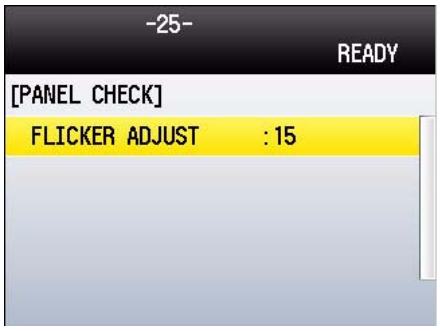
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

After replacing the control panel, adjust the flicker value of the control panel using the service mode.

1) Using the service mode, make the machine display the flicker value adjustment screen for the control panel.
   TESTMODE> PANEL> FLICKER CHECK START

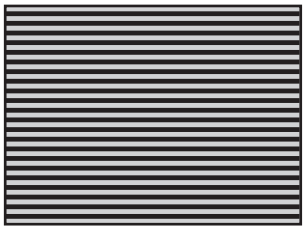
F-11-56

2) Press the [OK] key.
   The flicker value entry screen is displayed.



F-11-57

3) Press the [OK] key.
   The flicker adjustment pattern (a pattern with horizontal stripes) is displayed in the LCD.
   Pressing the right/left arrow keys, search for the area with the minimum flicker.



F-11-58

4) Press the [OK] key.
5) Press the [Back] key.
   The service mode operation is terminated.

11.5.12 NCU Board

11.5.12.1 Before Removing the NCU PCB

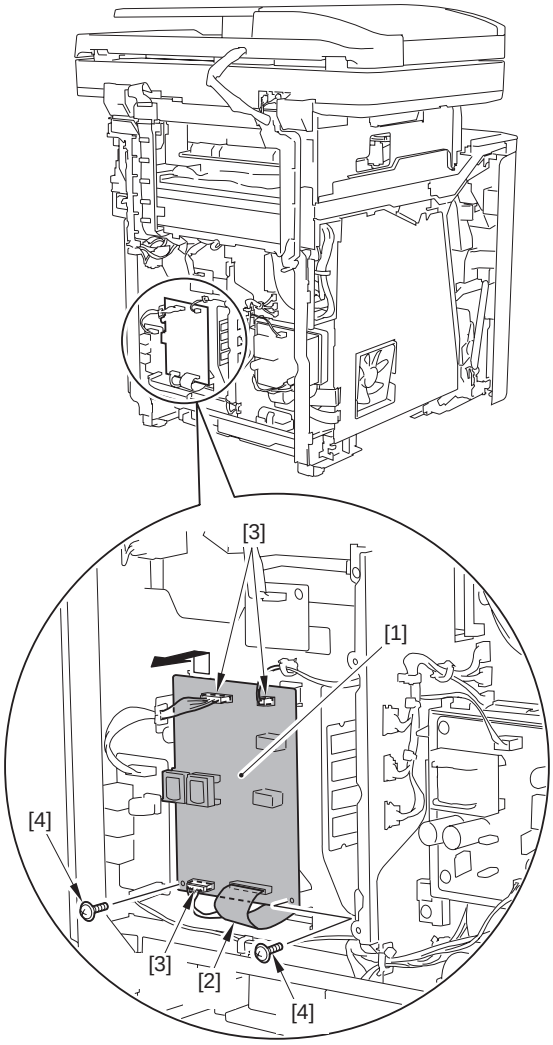
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
3) Remove the left cover.(page 11-14) Reference [Removing the Left Cover]
4) Remove the Electrical Components Cover.(page 11-16) Reference [Removing the Electrical Components Cover]

11.5.12.2 Removing the NCU PCB

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the NCU PCB.
   - 1 flat cable [2]
   - 3 connectors [3]
   - 2 screws [4]



F-11-59

11.5.13 DC Controller PCB

11.5.13.1 Before Removing the DC Controller PCB

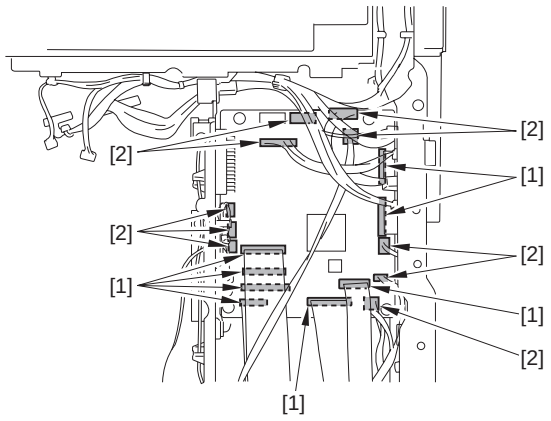
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
3) Remove the left cover.(page 11-14) Reference [Removing the Left Cover]
4) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]
5) Remove the Electrical Components Cover.(page 11-16) Reference [Removing the Electrical Components Cover]
6) Remove the Controller Box.(page 11-16) Reference [Removing the Controller Box]
7) Remove the Off Hook PCB. (only of the machine with FAX)(page 11-27) Reference [Removing the Off Hook PCB]

11.5.13.2 Removing the DC Controller PCB

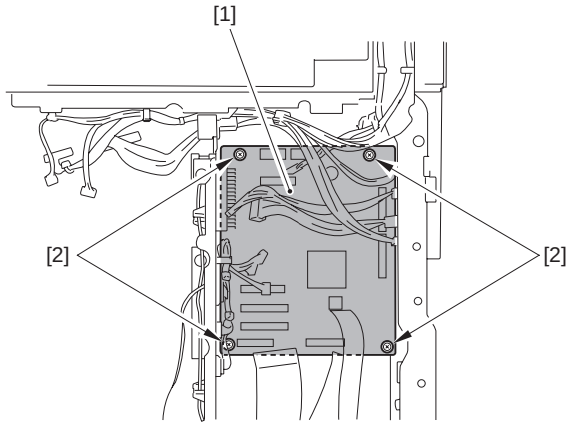
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Disconnect the 8 flat cable connectors [1] and the 10 connectors [2].



F-11-60

2) Remove the DC controller PCB [1].
- 4 screws [2]



F-11-61

11.5.13.3 Procedure after Replacing the DC controller PCB

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

After replacing the DC controller PCB, restore the backup data from the main controller PCB.
1) Using the service mode, restore the backup data of the DC controller stored in NVRAM of the main controller PCB to NVRAM of the DC controller PCB.
COPIER> FUNCTION> VIFFNC> RSTR-DCN
2) Execute "Initial Setting/Registration > Adjustment/Cleaning > Automatic Gradation Correction > Full Correction".

11.5.14 Memory Controller PCB

11.5.14.1 Before Removing the Memory Controller PCB

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

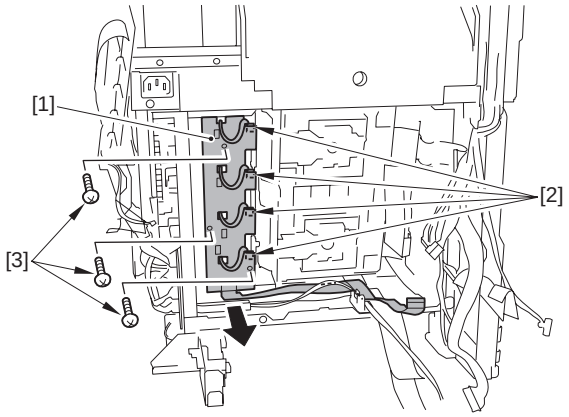
1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
3) Remove the left cover.(page 11-14) Reference [Removing the Left Cover]
4) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]
5) Remove the Electrical Components Cover.(page 11-16) Reference [Removing the Electrical Components Cover]
6) Remove the Controller Box.(page 11-16) Reference [Removing the Controller Box]
7) Remove the Off Hook PCB. (only of the machine with FAX)(page 11-27) Reference [Removing the Off Hook PCB]
8) Remove the DC Controller PCB.(page 11-24) Reference [Removing the DC Controller PCB]
9) Remove the Laser Scanner Cover.(page 11-17) Reference [Removing the Laser Scanner Cover]

11.5.14.2 Removing the Memory Controller PCB

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER

C1030 / Color imageRUNNER C1030iF

1) Remove the memory controller PCB [1].
- 4 connectors [2]
- 3 screws [3]



F-11-62

11.5.15 Duplexing Driver PCB

11.5.15.1 Before Removing the Duplex Driver PCB

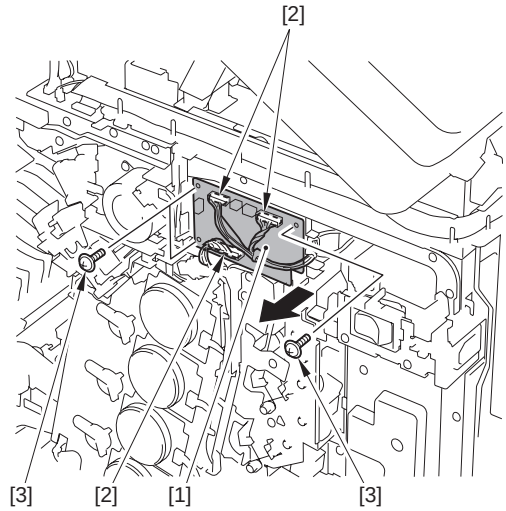
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
3) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]

11.5.15.2 Removing the Duplex Driver PCB

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the duplex driver PCB [1].
- 3 connectors [2]
- 3 screws [3]



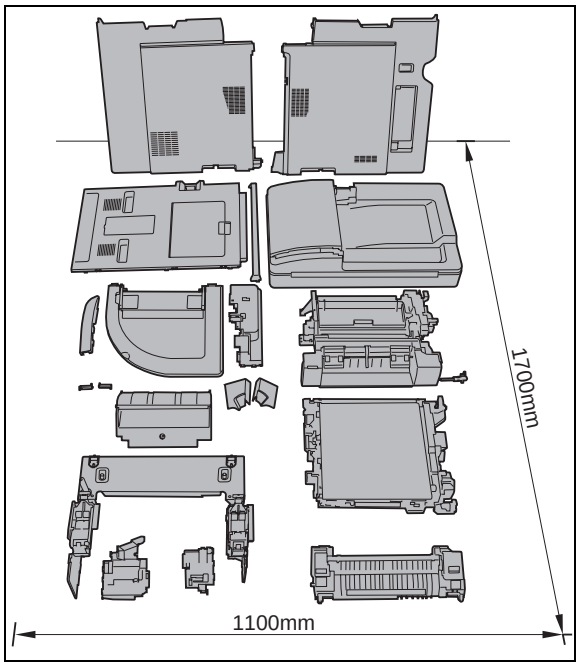
F-11-63

11.5.16 Low-voltage Power Supply PCB

11.5.16.1 Before Removing the Low-Voltage Power Supply PCB

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

MEMO:
19 parts (e.g.: external cover, unit) need to be removed when removing the low voltage power supply PCB. Be sure to have enough space equivalent to 1,700mm x 1,100mm for storing parts.

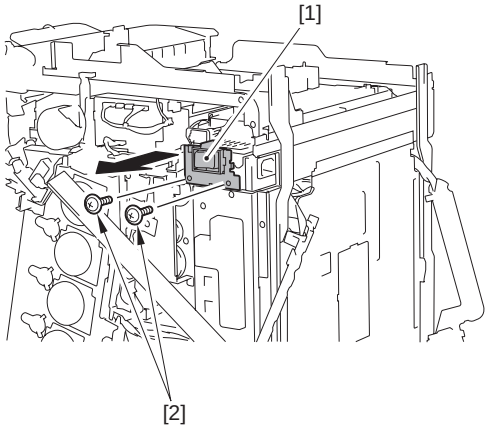


1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]
2) Remove the fixing assembly.(page 10-8) Reference [Removing the Fixing Assembly]
3) Remove the rear cover unit.(page 11-12) Reference [Removing the Rear Cover Unit]
4) Remove the ADF Unit + Reader Unit.(page 5-9) Reference [Removing the ADF Unit + Reader Unit]
5) Remove the left cover.(page 11-14) Reference [Removing the Left Cover]
6) Remove the right cover.(page 11-12) Reference [Removing the Right Cover]
7) Remove the Upper Frame Unit.(page 11-20) Reference [Removing the Upper Frame Unit]
8) Remove the Reversal Unit.(page 9-29) Reference [Removing the Reversal Unit]

11.5.16.2 Removing the Low Voltage Power Supply PCB

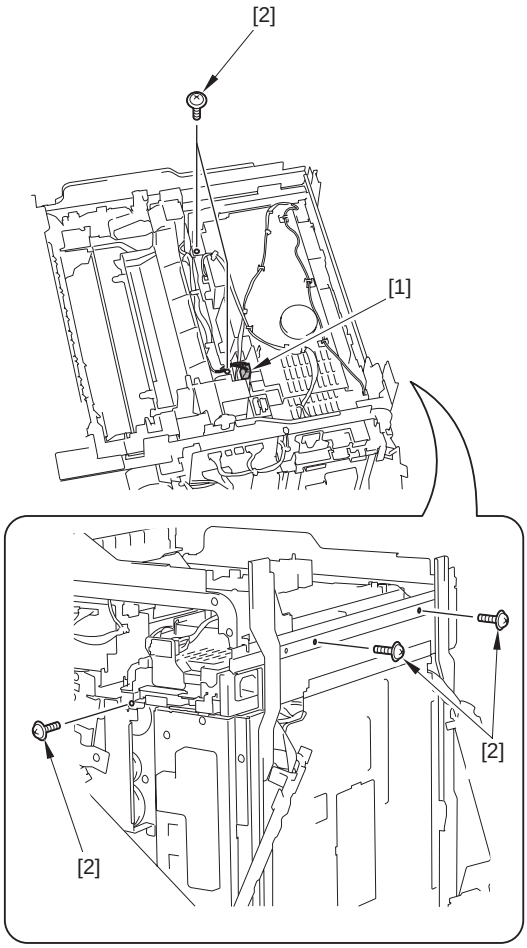
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the switch button unit [1].
- 2 screws [2]



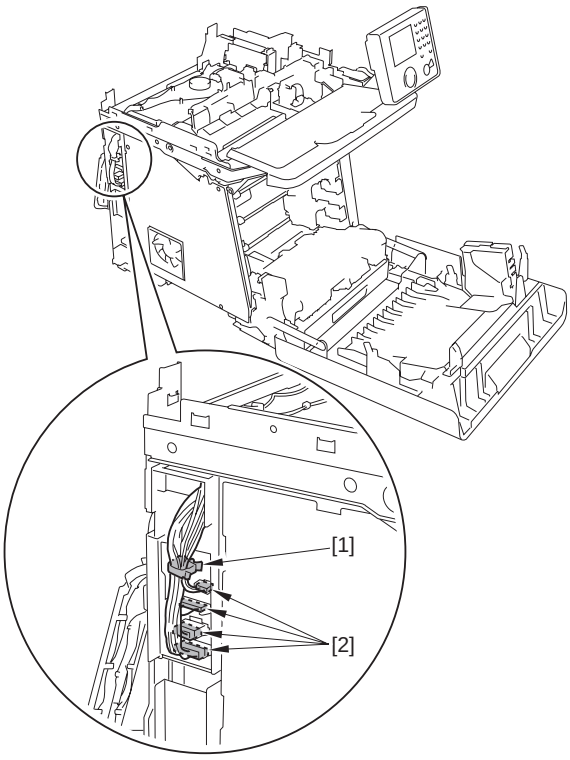
F-11-64

2) Disconnect the connector [1] and remove the 5 screws (TP) [2].



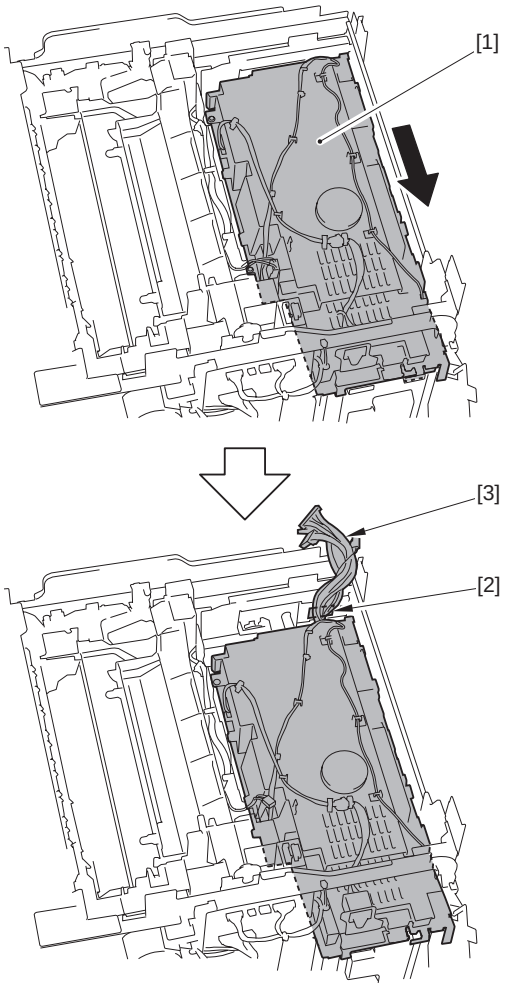
F-11-65

3) Remove the wire saddle [1] and disconnect the 4 connectors [2].



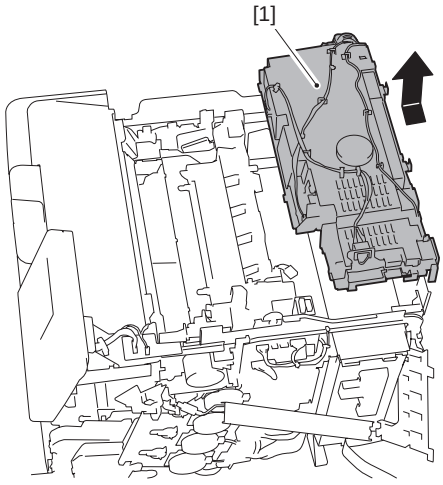
F-11-66

4) Move the low voltage power supply PCB [1] in the direction of the arrow, and free the 5 harnesses [3] from the harness guide hole [2].



F-11-67

5) Remove the low voltage power supply PCB [1].



F-11-68

11.5.17 High-voltage Power Supply PCB

11.5.17.1 Before Removing the High Voltage Power Supply PCB

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

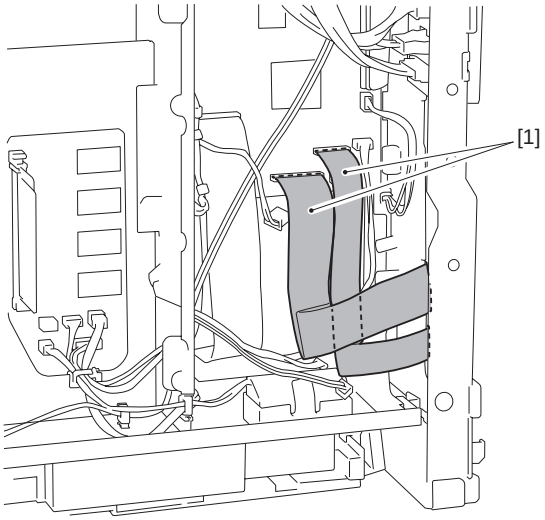
1) Remove the ETB unit.(page 8-30)Reference [Removing the ETB Unit]
2) Remove the rear cover unit.(page 11-12)Reference [Removing the Rear Cover Unit]
3) Remove the left cover.(page 11-14)Reference [Removing the Left Cover]
4) Remove the Electrical Components Cover.(page 11-16)Reference [Removing the Electrical Components Cover]
5) Remove the Off Hook PCB. (only of the machine with FAX)(page 11-

27) Reference [Removing the Off Hook PCB]

11.5.17.2 Removing the High Voltage Power Supply PCB

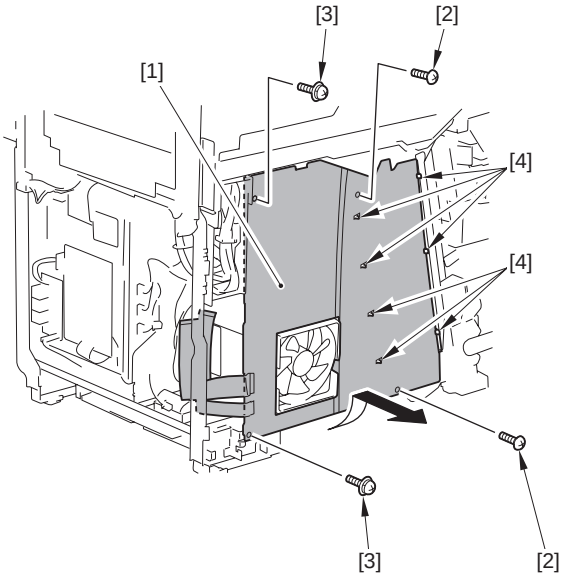
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Disconnect the 2 flat cables [1].



F-11-69

2) Remove the high voltage power supply PCB [1].
- 2 screws (binding) [2]
- 2 screws (double SEMS) [3]
- 7 claws [4]



F-11-70

11.5.18 Off Hook PCB

11.5.18.1 Before Removing the Off Hook PCB

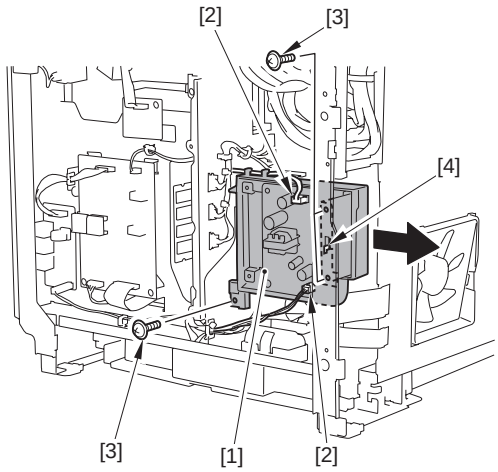
imageRUNNER C1022 / imageRUNNER C1022i

1) Remove the ETB unit. (page 8-30) Reference [Removing the ETB Unit]
2) Remove the rear cover unit. (page 11-12) Reference [Removing the Rear Cover Unit]
3) Remove the left cover. (page 11-14) Reference [Removing the Left Cover]
4) Remove the Electrical Components Cover. (page 11-16) Reference [Removing the Electrical Components Cover]

11.5.18.2 Removing the Off Hook PCB

imageRUNNER C1022 / imageRUNNER C1022i

1) Remove the the Off Hook PCB unit [1].
- 2 connectors [2]
- 3 screws [3]
- 1 hook [4]



F-11-71

11.5.19 Cooling Fan

11.5.19.1 Before Removing the Cooling Fan

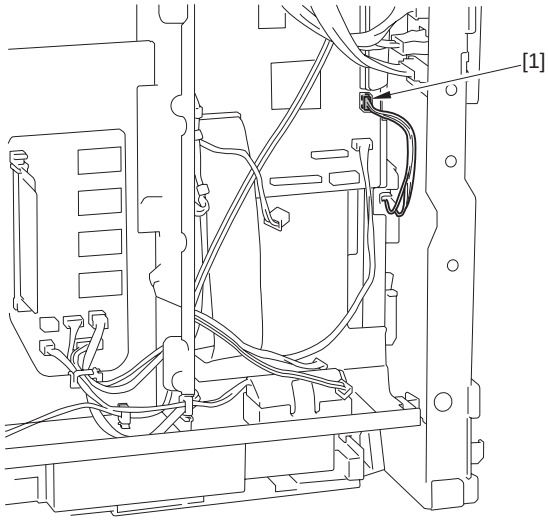
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Remove the ETB unit. (page 8-30) Reference [Removing the ETB Unit]
2) Remove the rear cover unit. (page 11-12) Reference [Removing the Rear Cover Unit]
3) Remove the left cover. (page 11-14) Reference [Removing the Left Cover]
4) Remove the Electrical Components Cover. (page 11-16) Reference [Removing the Electrical Components Cover]
5) Remove the Off Hook PCB. (only of the machine with FAX) (page 11-27) Reference [Removing the Off Hook PCB]
6) Removing the High Voltage Power Supply PCB. (page 11-27) Reference [Removing the High Voltage Power Supply PCB]

11.5.19.2 Removing the Cooling Fan

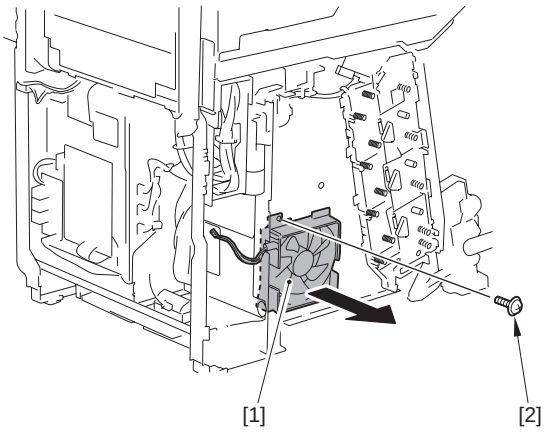
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Disconnect the connector [1].



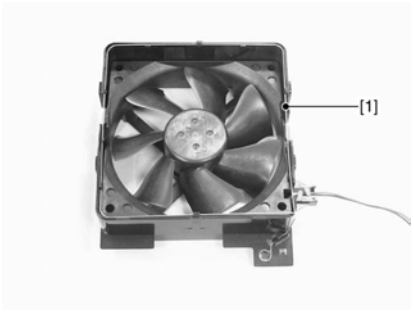
F-11-72

2) Remove the cooling fan unit [1].
- 1 screw [2]



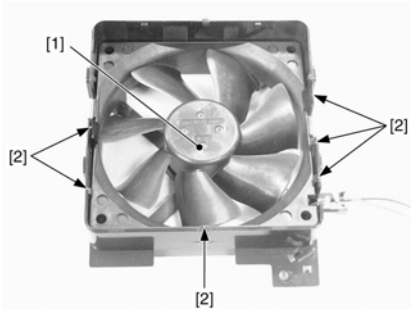
F-11-73

3) Remove the grounding spring [1].



F-11-74

4) Remove the heat exhaust fan [1].
- 6 claws [2]



F-11-75

11.5.20 Duplex Fan

11.5.20.1 Before Removing the Duplex Fan

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

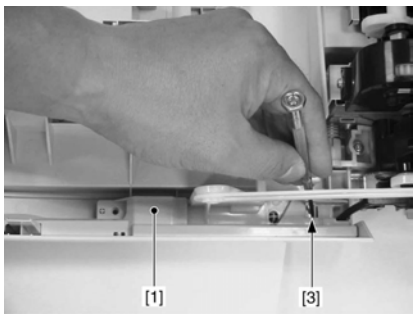
1) Remove the ETB unit.(page 8-30) Reference [Removing the ETB Unit]

11.5.20.2 Removing the Duplex Fan

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

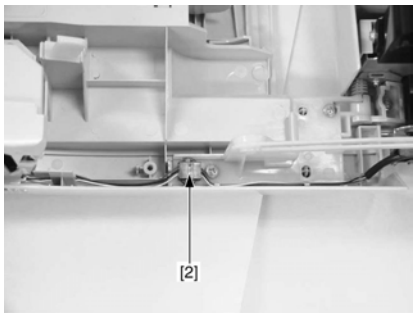
1) Remove the cable cover [1].
- 1 screw [2]
- 1 claw [3]

F-11-76

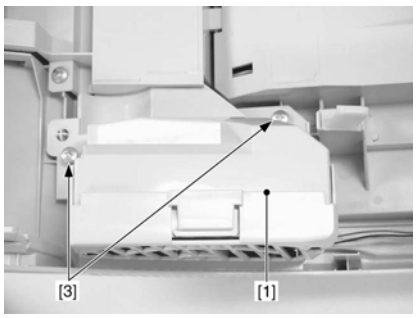


F-11-77

2) Remove the duplex fan unit [1].
- 1 connector [2]
- 2 screws [3]

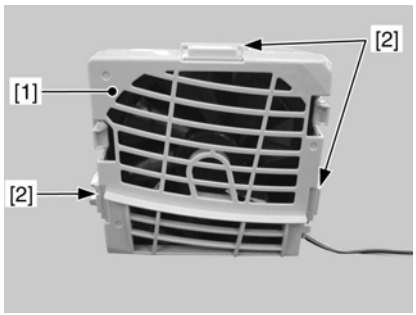


F-11-78



F-11-79

3) Remove the fan cover [1] to remove the duplex fan.
- 3 claws [2]



F-11-80

Chapter 12 e-Maintenance/imageWARE Remote

Contents

12.1 e-Maintenance/imageWARE Remote 12-1
12.1.1 Overview 12-1
12.1.2 Setting Procedure 12-1
12.1.3 Troubleshooting guide 12-10
12.1.4 Service cautions 12-12
12.1.5 Overview 12-13
12.1.6 Service cautions 12-14
12.1.7 Setting Procedure 12-15
12.1.8 FAQ 12-28
12.1.9 Troubleshooting 12-29
12.1.10 Error code and strings 12-32

12.1 e-Maintenance/imageWARE Remote

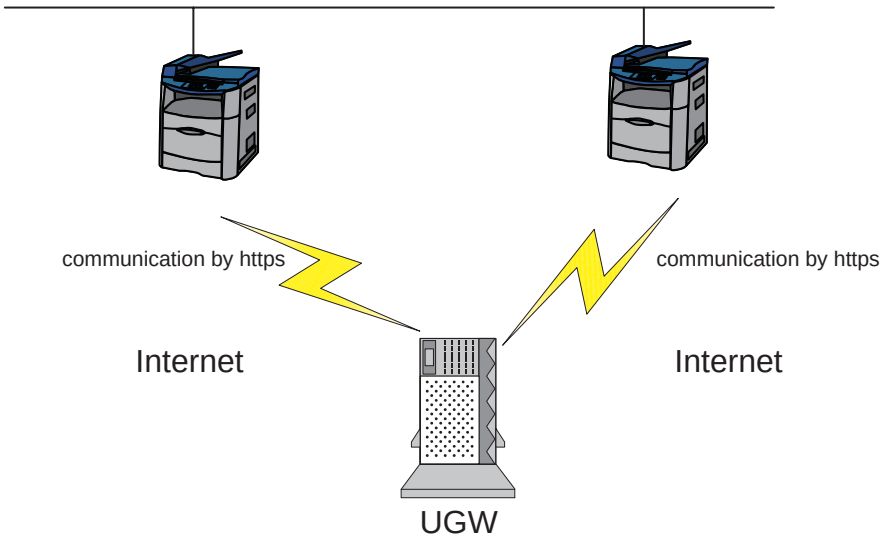
12.1.1 Overview

imageRUNNER C1022 / imageRUNNER C1022i

The e-Maintenance/imageWARE Remote system allows a customer's device information and status to be monitored via the Internet on a server called UGW (Universal Gateway Server).

The following device information/ statuses can be monitored.
-tariff counters
-service mode counters
-parts specific counters
-mode specific counters
-ROM versions
-service call errors
-jam statuses
-consumables management statuses

Further, as the above is all customer information, https protocol is used for communication between UGW and the device, providing enhanced security.



F-12-1

12.1.2 Setting Procedure

imageRUNNER C1022 / imageRUNNER C1022i

When monitoring the host machine from e-Maintenance/imageWARE Remote system, following settings are required.

1 Pre-Check
Ask UGW personnel to make sure that the target device for e-Maintenance/imageWARE Remote system is registered in UGW.

2 Preparation
Ask a system administrator to obtain the following network related information.

Information 1
How to set the IP address
Automatic setting : DHCP, RARP, BOOTP
Manual setting : planned IP address, subnet mask, gateway address

Information 2
DNS server: Yes or No
If DNS server exists, obtain the following information.
Primary DNS server address
Secondary DNS server address

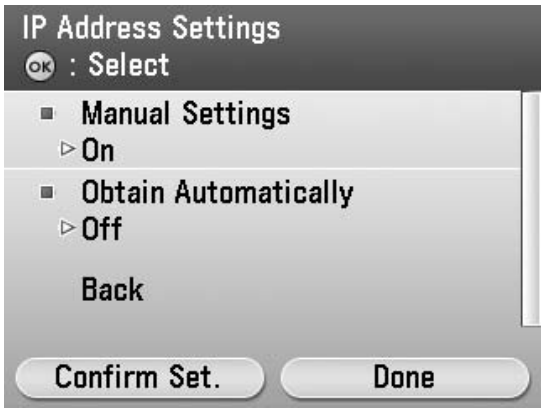
Information 3
Proxy server: Yes or No
If proxy server exists, obtain the following information.
Proxy server address

Information 4
Authentication of proxy server: Yes or No
If the authentication is required on proxy server, obtain the following information.
User name and password for proxy authentication

3 Network related setting
Based on the information from preparation, make the network related setting of iR device in the following procedure.

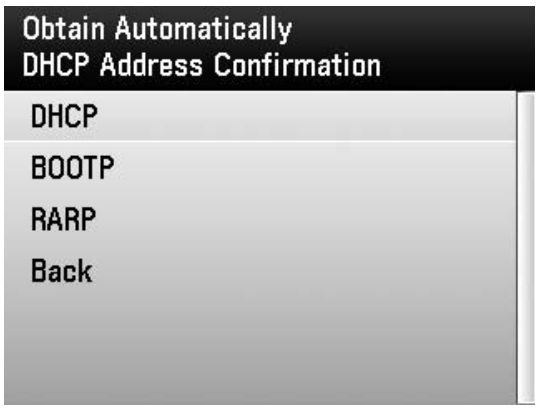
a. Select: Additional function > System management setting > Network setting > TCP/IP setting > IPv4 setting > IP address setting.

b. Based on the information 1 from "Information 1", make the IP address setting.
Select the setting method of IP address and press OK.



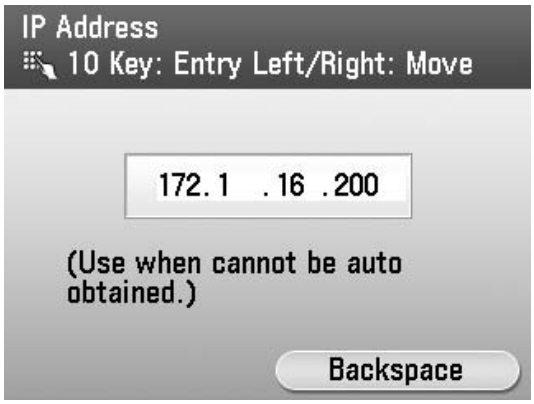
F-12-2

c. In case of automatic setting, select DHCP, RARP or BOOTP and press OK.



F-12-3

d. In case of manual settings, set the IP address first and press OK.

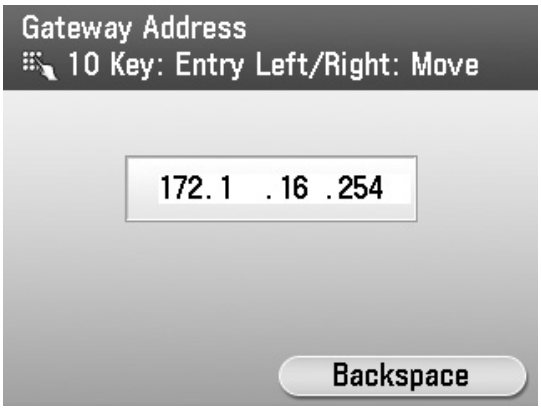


F-12-4

e. Set the subnet mask and press OK.

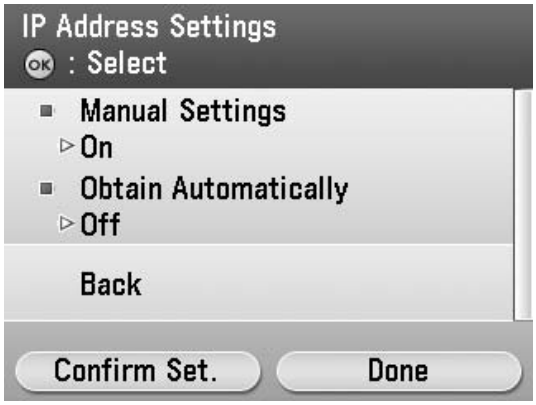
F-12-5

f. Set the gateway address and press OK.



F-12-6

g. Select "Back" and press OK.

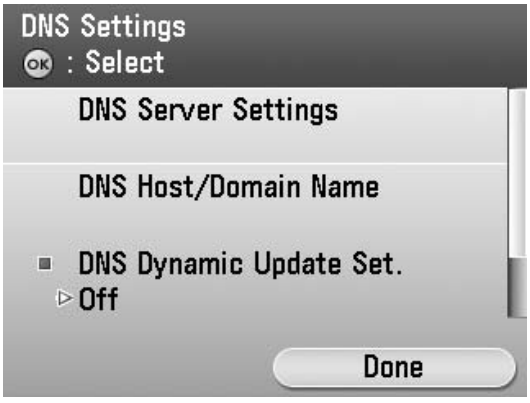


F-12-7

h. Press OK.

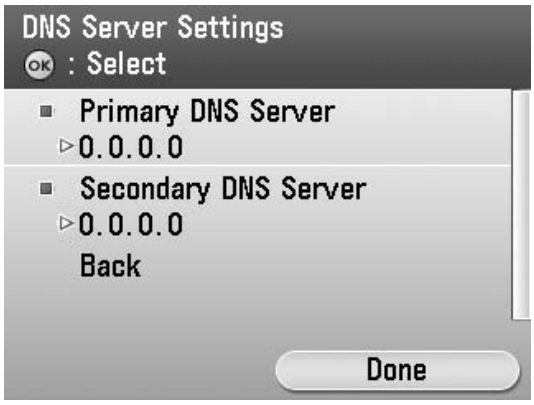
i. Press exit.

j. Select: Additional function > System management setting > Network setting > TCP/IP setting > IPv4 setting > DNS setting > DNS server setting and press OK.



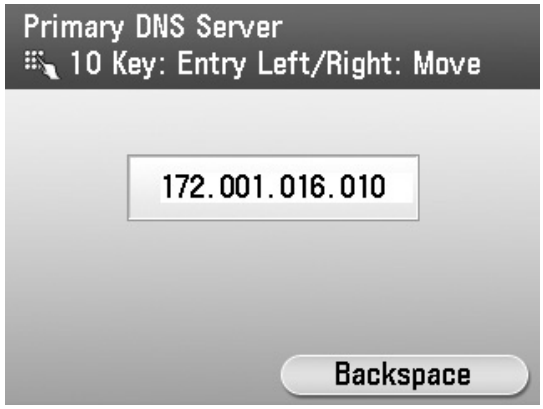
F-12-8

k. Select a primary DNS server and press OK.



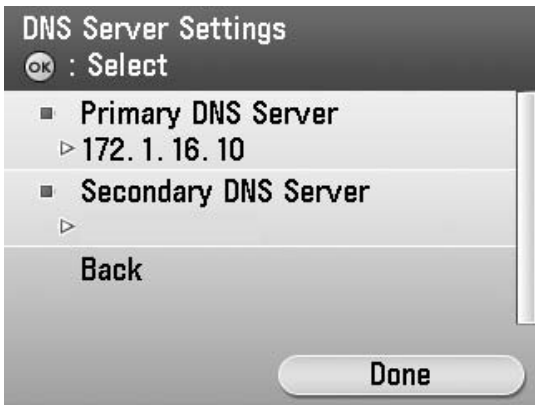
F-12-9

l. Based on the information from "Information 2", make the primary DNS server setting and press OK.



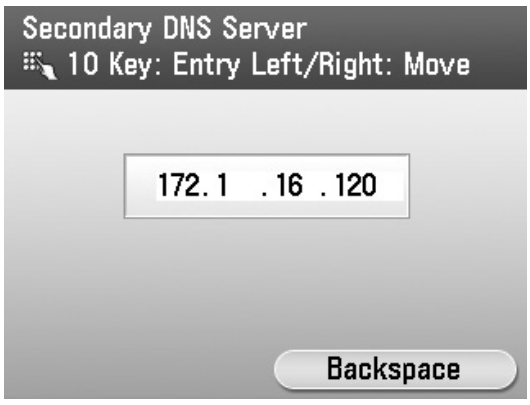
F-12-10

m. There is secondary server where in user network, select the secondary DNS server and press OK.



F-12-11

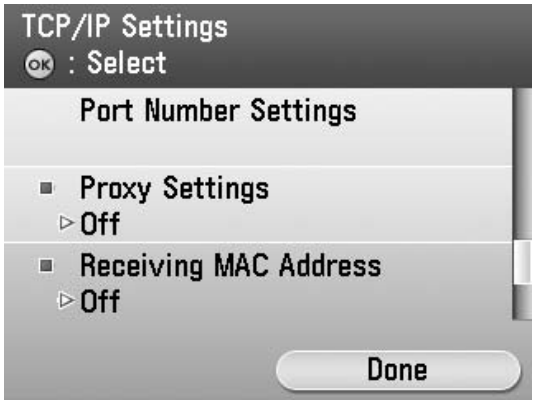
n. Based on the information from "Information 2", make the secondary DNS server setting and press OK.



F-12-12

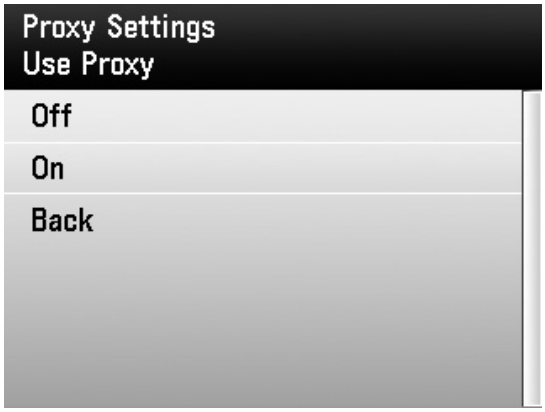
o. Press exit.

p. Select: Additional function > System management setting > Network setting > TCP/IP setting > Proxy setting and press OK.



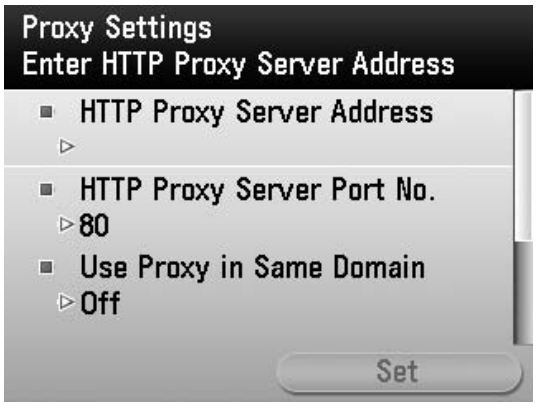
F-12-13

q. Based on the "information 3 from 2 preparation", there is proxy server in user network, make the proxy setting.



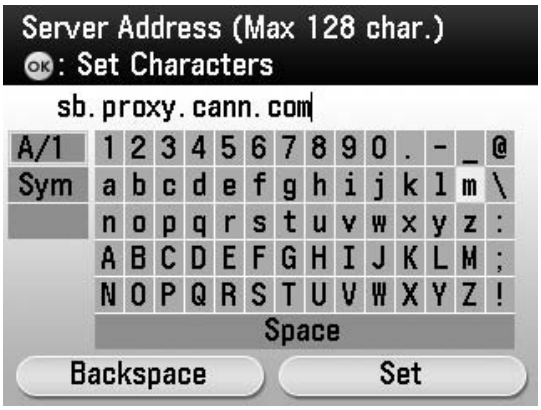
F-12-14

r. Select the HTTP proxy server address and press OK.



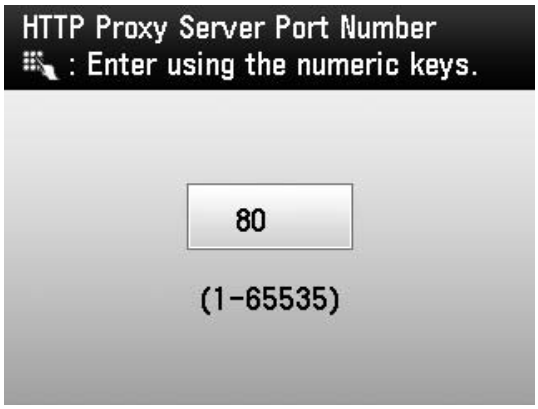
F-12-15

s. Based on the "Information 3 from 2 preparation", enter the proxy server address and press "Set".



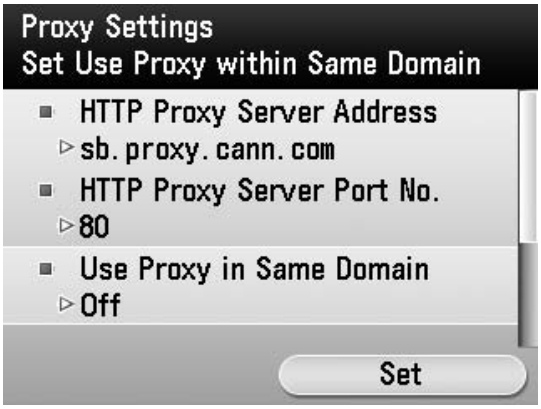
F-12-16

t. Enter the port number and press OK.



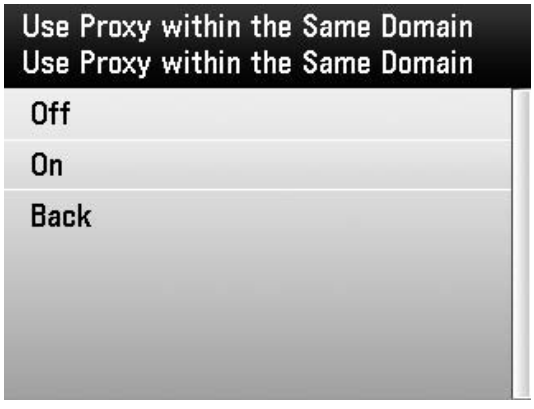
F-12-17

u. Select "Use Proxy Authentication" if proxy authentication is required and press OK.



F-12-18

v. Select ON and press detail setting.

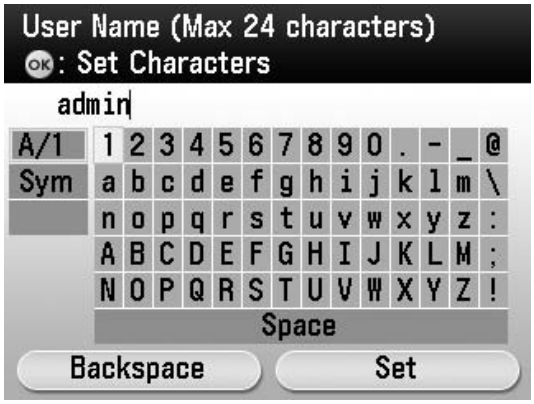


F-12-19

w. Select a user name and press OK.

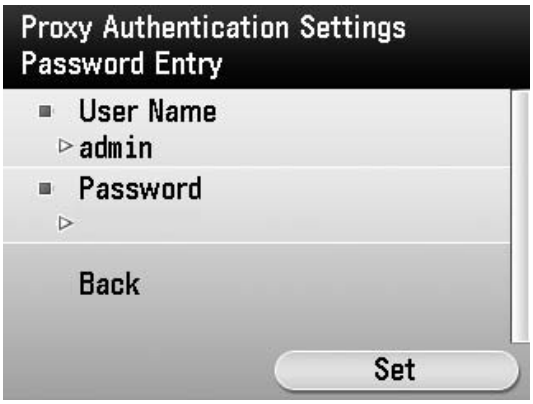
F-12-20

x. Enter a user name for authentication and press Set.



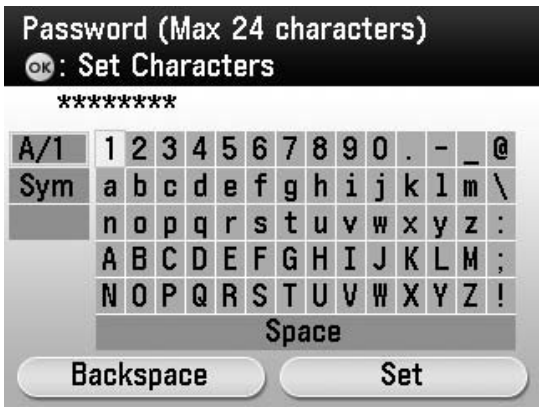
F-12-21

y. Select "Password" and press OK.



F-12-22

z. Enter the password and press "Set".



F-12-23

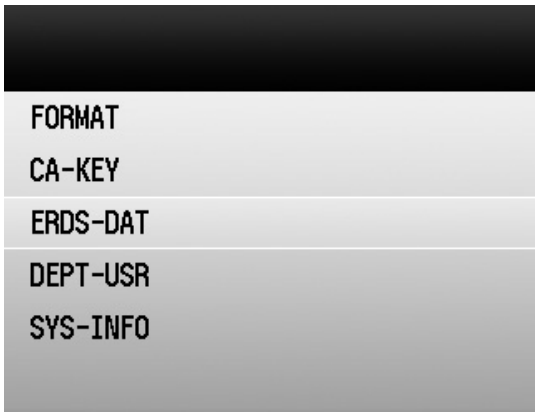
aa. Press "Set".

F-12-24

bb. Press "Reset" to exit Additional function.

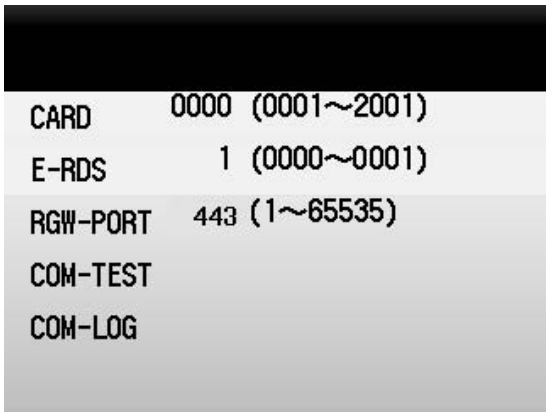
cc. Turn OFF/ON the power of the host machine.

4 e-Maintenance/imageWARE Remote system Setting
a. Select: Service mode > COPIER > Function > Clear > ERDS-DAT and press OK.



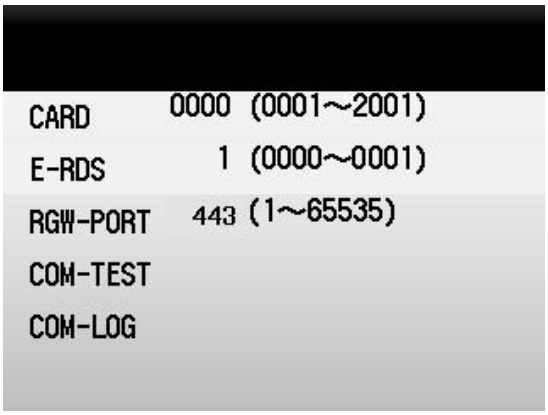
F-12-25

b. Select: Service mode > COPIER > Function > INSTALL > E-RDS and enter "1" and press OK. This makes the communication function with UGW ON.



F-12-26

c. Select: Service mode > COPIER > Function > INSTALL > COM-TEST and press OK. This performs the communication test with UGW. When a communication succeeds, OK is displayed. If NG is displayed, refer to the troubleshooting and continue testing until the communication test will be OK.


CARD 0000 (0001～2001)
E-RDS 1 (0000～0001)
RGW-PORT 443 (1～65535)
COM-TEST
COM-LOG

F-12-27

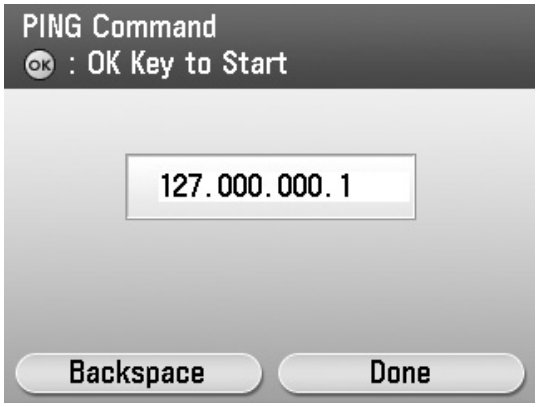
12.1.3 Troubleshooting guide

imageRUNNER C1022 / imageRUNNER C1022i

If the communication test with UGW results in FAIL, follow the troubleshooting steps described below.

(1) Initial procedures
1) Check connection
Is the status indicator LED for the HUB port to which the main unit is connected ON?
YES: Proceed to Step 2).
NO: Check that the network cable is properly connected.

2) Loop back address confirmation
a) Additional Functions/ Registration>System administration settings>Network settings>TCP/ IP settings>IPv4 settings>PING command. Input 127.0.0.1, and press the Start button.



F-12-28

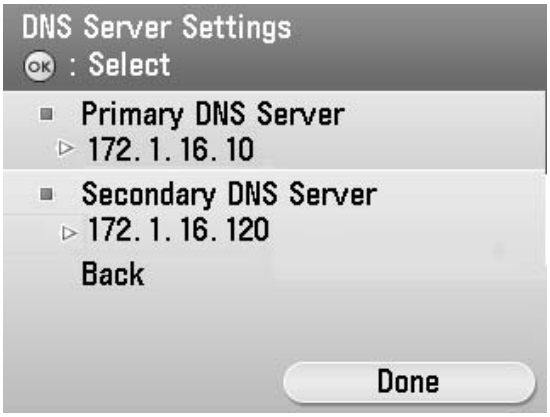
Is the response from the host displayed?

YES: Proceed to Step 3).
NO: There is a possibility that the main unit's network settings are wrong. Check the details of the IPv4 settings once more.

3) Confirmation from a another PC connected to same network.
a) Request the user to ping the main unit from a PC connected to same network.

Does the main unit respond?
YES: Proceed to Step 4).
NO: Confirm the details of the main unit's IP address and subnet mask settings.

4) Confirm DNS connection
a) Additional Functions>System administration settings>Network settings>TCP/ IP settings>DNS settings>DNS Server Address Settings, and note down both the primary and secondary DNS server addresses.



F-12-29

b) Press Cancel.
c) Additional Functions/ Registration>System administration settings>Network settings>TCP/ IP settings>IPv4 settings>PING command. Input the primary DNS server noted down in step a) as the IP address, and then press Start.

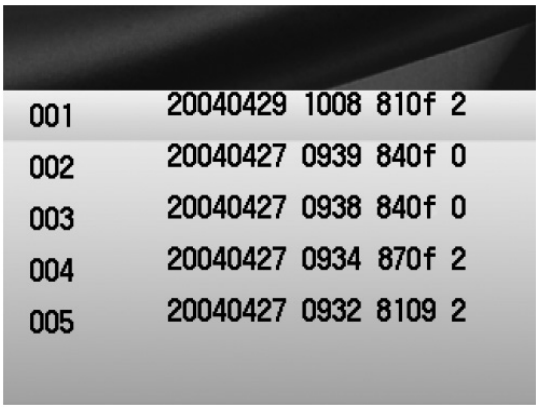
Is the response from the host displayed?

YES: Proceed to step Troubleshooting using communication log.
NO: Input the secondary DNS server noted down in step a) as the IP address, and then press Start.

Is the response from the host displayed?

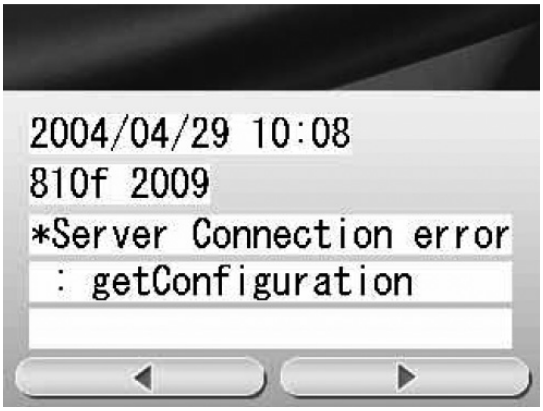
YES: Proceed to Troubleshooting using communication log.
NO: There is a possibility that the DNS server address is wrong. Reconfirm the address with the user's system administrator.

(2) Troubleshooting using communication log
Enter Service mode>Function>INSTALL>COM-LOG and the following communication log will be displayed.



F-12-30

In the log, text strings that start with * are communication test (COM-TEST) error logs. (See line 5 in the illustration above.)
Pressing on a line that begins with an * will display further details, as per the illustration below.)



F-12-31

A detailed description of the error appears below 'Information'. Press the OK button to return to the log.
Details of the errors and their remedies are as described below.

T-12-1

	Error text string	Error description	Cause	Remedy
1	SUSPEND: Communication test not performed	E-RDS is ON, but the communication test has not completed.	E-RDS has been booted up (device reboot) while E-RDS was ON but the communication test had not yet been performed.	Service mode>Function>INSTALL>COM-TEST
2	Event Registration has failed.	Event waiting error	Processing (event processing) within the device has failed.	Turn the device OFF/ ON. If the error occurs again even after OFF/ ON, replace the device system software. (Upgrade)
3	URL scheme error (not https)	URL scheme error	The header of the URL of the registered UGW is not in https format.	Check that the value of Service mode>Function>Install>RGW-ADR is https://a01.ugwdevice.net/ugw/agentif010.
4	Server connection error	UGW connection error	Displayed in the event of a TCP/IP communication fault. Also displayed when an attempt is made at communication with the device IP address not set.	Check the network connection, as per the initial procedures.
5	URL server specified is illegal	UGW server specification URL error	A URL different to that specified by the UGW has been set.	Check that the value of Service mode>Function>Install>RGW-ADR is https://a01.ugwdevice.net/ugw/agentif010.
6	Proxy connection error	Proxy connection error	Cannot connect to proxy server.	Check proxy server address and re-enter if necessary.
7	Proxy authentication error	Proxy authentication error	Proxy authentication error failed.	Check the user name and password required in order to login to the proxy, and re-enter if necessary.
8	Server certificate error	Server certificate error	-No route certificate installed in device. -Certificate other than that initially registered in the user's operating environment is being used, but has not been registered with the device.	Install latest device system software. (Upgrade)
9	Server certificate expired	Server certificate expired	-The route certificate registered with the device has expired. -Certificate other than that initially registered in the user's operating environment is being used, but has not been registered with the device. -The device time and date is outside of the certificated period.	Check that the device time and date are correctly set. If the device time and date are correct, upgrade to the latest system software.

	Error text string	Error description	Cause	Remedy
10	Unknown error	Unknown error	Some other kind of communication error has occurred.	Try again after a period of time. If the same error occurs again, check the UGW status with the UGW administrator.
11	SOAP Fault	SOAP communication error	SOAP communication error has occurred.	Check that the value of Service mode> Function >Install> RGW-PORT is 443.
12	Server response error (NULL)	UGW response error(https communication error)	Displayed when communication with UGW has been successful, but an error of some sort has prevented UGW from responding. When (Null) is displayed at the end of the message, this indicates that there has been an error in the HTTPS communication method.	Try again after a period of time. If the same error occurs again, check the UGW status with the UGW administrator.
13	Server response error(Hexadecimal)	UGW response error(UGW error)	Displayed when communication with UGW has been successful, but an error of some sort has prevented UGW from responding.(Hexadecimal) displayed at the end of the message is an error code returned by UGW. In the case of this kind of error only, [Server detailed error] is displayed at the end of the error information.	Try again after a period of time.
14	Device internal error	Device internal error	An internal error, such as memory unavailable, etc., has occurred during a device internal error phase.	Switch the device OFF/ ON. Or, replace the device system software. (Upgrade)
15	Server schedule is invalid	Schedule transmission settings are in correct.	During the communication test, there has been some kind of error in the schedule values passed from UGW.	When the error occurs, report the details to the support department. Then, after the UGW side has responded, try the communication test again.
16	Server response time out	UGW response time out	Due to network congestion, etc., the response from UGW does not come within the specified time. (HTTPS level time out)	If this error occurs when the communication test is being run, wait some time and run the test again.
17	Service not found	Service not found (incorrect path)	There is a mistake in the UGW URL, and UGW cannot be accessed.	Check that the value of Service mode > Function > Install > RGW-ADR is https://a01.ugwdevice.net/ugw/agentif010.
18	E-RDS switch is set OFF	E-RDS is invalid.	A communication test has been attempted with the E-RDS operation switch still OFF.	Set Service mode> Function >Install>E-RDS to 1, and then run Service mode> Function>Install> COM-TEST.
19	Server schedule does not exist	There is no schedule for the connected device.	Blank schedule data have been received from UGW.	Check the device settings status with the UGW administrator.
20	Network is not ready, try later	Network not ready	Communication attempted without confirming network connection, just after booting up a device in which the network preparations are not ready. (Network connection not established within 60 seconds of device boot up.)	Check the network connection, as per the troubleshooting initial procedures. Run Service mode>Function> Install<COM-TEST about 60 seconds after turn on the device.
21	URL error	URL settings error	Non-URL text string entered in URL field.	Check that the value of Service mode>Function>Install>RGW-ADR is https://a01.ugwdevice.net/ugw/agentif010.
22	Proxy address resolution error	Proxy address resolution error	Cannot connect to proxy server.	Check that the proxy server name is correct. If the proxy server name is correct, check the DNS connection, as per the troubleshooting initial procedures.
23	Server certificate verification error	Server certificate verification error (URL check)	The server URL and the server certificate URL are not correct.	Check that the value of Service mode>Function>Install>RGW-ADR is https://a01.ugwdevice.net/ugw/agentif010.
24	Server specified list is wrong	UGW specified list include wrong value on the alarm filtering function.	UGW specified list include wrong value on the alarm filtering function.	Check the device settings status with the UGW administrator.
25	Server specified list is too big	UGW specified list is too big on alarm/alert filtering function.	UGW specified list include wrong value on the alarm filtering function.	Check the device settings status with the UGW administrator.
26	Server address resolution error	UGW server address resolution error	The UGW server name has not been resolved.	Check that the value of Service mode>Function >Install>RGW-ADR is https://a01.ugwdevice.net/ugw/ agentif010.If the value is correct, check the DNS connection, as per the troubleshooting initial procedures.

12.1.4 Service cautions

imageRUNNER C1022 / imageRUNNER C1022i

After performing the following service actions, it is necessary to perform Service mode>COPIER>Function>Clear>ERDS-DAT and Service mode>COPIER>Function >INSTALL>COM-TEST. Failure to do so will result in abnormality of the UGW counter transmission.
- System upgrade
- COPIER>Function>Clear>MN-CONT

Also, after replacing the main controller board, all settings must be reprogrammed.

The following settings in service mode must not be change unless there are specific instructions to do so. Changing these values will cause error in communication with UGW.

Service mode>COPIER>Function>INSTALL>RGW-PORT
Default: 443

Service mode>COPIER>Function>INSTALL>RGW-ADR
Default: https://a01.ugwdevice.net/ugw/agentif010

12.1.5 Overview

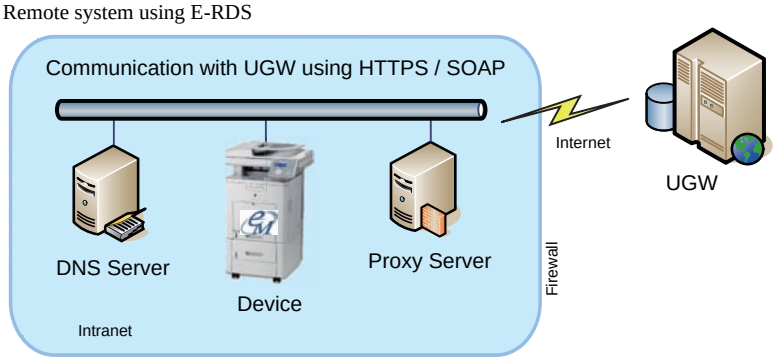
Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Overview
Embedded RDS (hereafter, referred to as E-RDS, which stands for EMBEDDED-RDS) is a network module embedded with a customer's device and enables e-Maintenance / imageWARE Remote (Remote Diagnosis System), which can collect and transmit status changes, counter values, error logs, and consumable information such as the toner low/ out of the device to a remote maintenance server called UGW (Universal Gateway Server) via Internet.

The following device information/ statuses can be monitored.
- Service mode counter (Billing counts)
- Global click counter
- Parts counter
- Mode counter
- Firmware info
- Service call error log
- Jam log
- Alarm log
- Status changes (Toner low/ out, etc.)

Since high confidentiality is required for the information shown above, it performs communication between a device and the UGW using HTTPS/ SOAP protocol.

The e-Maintenance / imageWARE Remote system using E-RDS



F-12-32

Features and benefits
E-RDS embedded with a network module in advance can realize a front-end processing of e-Maintenance/ imageWARE Remote system without attaching any extra hardware equipment.

12.1.6 Service cautions

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) After performing the following service actions, it is necessary to perform initializing E-RDS settings (ERDS-DAT) and communication test (COM-TEST).
- System upgrade
- System installation

Also, after replacing the main controller board, all settings must be reprogrammed.

2) The following settings in service mode must not be change unless there are specific instructions to do so. Changing these values will cause error in communication with UGW.
- Set port number of UGW
  SERVICE MODE > COPIER > Function > INSTALL > RGW-PORT
  Default: 443

- URL setting of UGW
  SERVICE MODE > COPIER > Function > INSTALL > RGW-ADR
  Default: https://a01.ugwdevice.net/ugw/agentif010

12.1.7 Setting Procedure

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Confirmation and preparation in advance
To monitor a device with e-Maintenance/ imageWARE Remote, the following settings are required.

(1) Advance confirmation
Confirm with the UGW administrator that the device to be monitored with e-Maintenance/ imageWARE Remote is registered in the UGW.

(2) Advance preparations
Interview the user's system administrator in advance to find out the following information about the network.

Information item 1
IP address settings
- Automatic setting : DHCP, RARP, BOOTP
- Manual setting : IP address, subnet mask and gateway address to be set

Information item 2
Is there a DNS server in use?
If there is a DNS server in use, find out the following.
- Primary DNS server address
- Secondary DNS server address

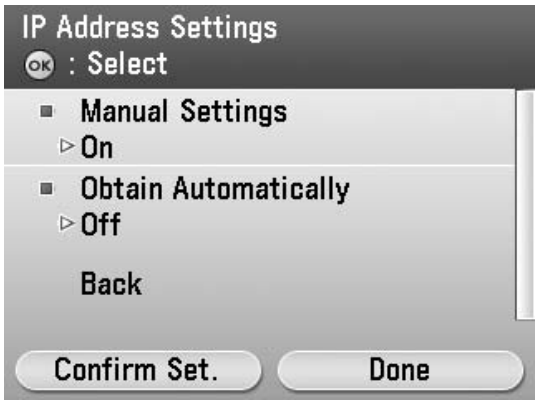
Information item 3
Is there a proxy server?
If there is a proxy server in use, find out the following.
- Proxy server address
- Port No. for proxy server

Information item 4
Is proxy server authentication required?
If proxy server authentication is required, find out the following.
- User name and password required for proxy authentication

(3) Network settings
Based on the results of the information obtained in (2) Advance preparations, make the device network related settings in accordance with the following procedures.

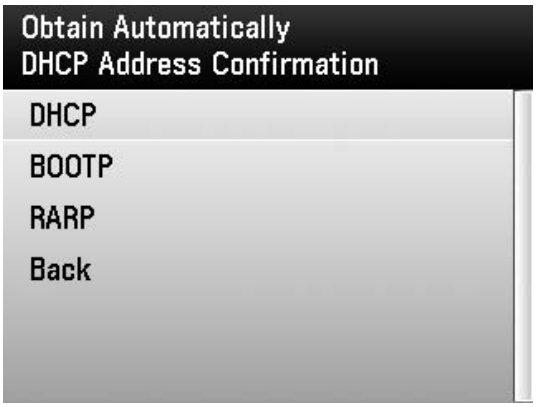
1) Displaying the Additional function screen
a. Press [Additional Func.] button.
b. When a system management department ID and system management password are set up, enter the System Manager ID and System Password to perform a log-in.

2) Setting IP address-related items
a. Select [Additional Func.] > [System Management Set.] > [Network Settings] > [TCP/IP Settings] > [IPv4 Settings] > [IP Address Settings].
b. Set the IP address based on the result obtained in "(2) Advance preparations - Information item 1".
- Select the setting method of IP address



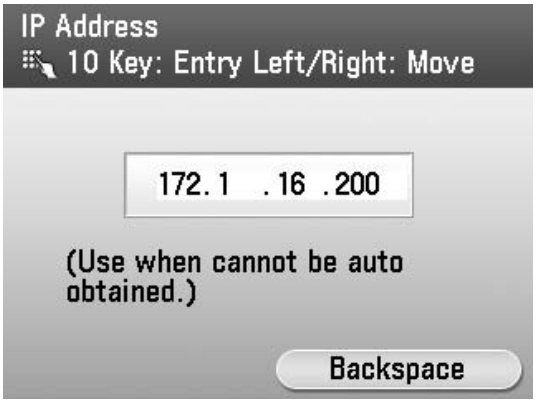
F-12-33

<In case of automatic setting>
- Select [DHCP], [RARP] or [BOOTP] and press [OK] button.



F-12-34

<In case of manual settings>
- Set the IP address first and press [OK] button.

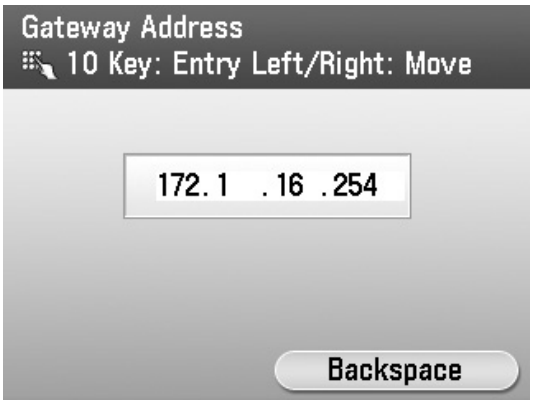


F-12-35

- Set the subnet mask and press [OK] button.

F-12-36

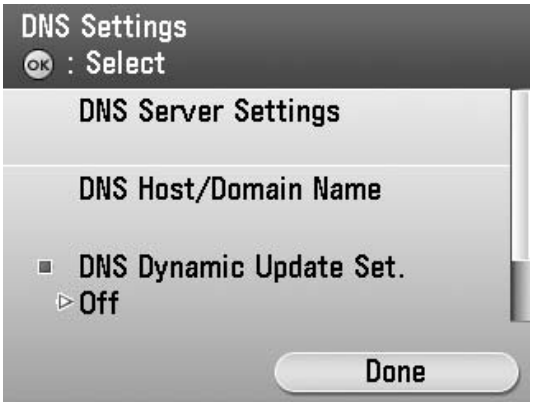
- Set the gateway address and press [OK] button.



F-12-37

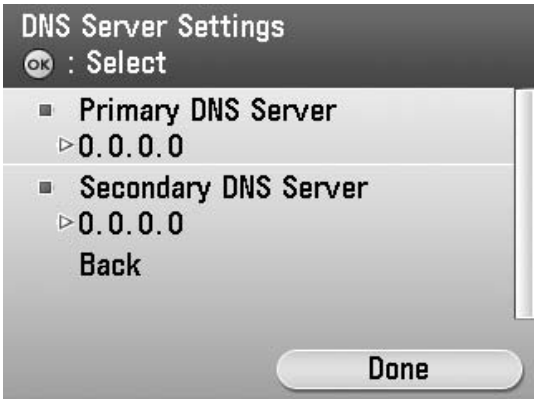
c. Press [Back] button.

3) DNS Settings
a. Select [DNS Settings] > [DNS Server Settings] and press [OK] button.



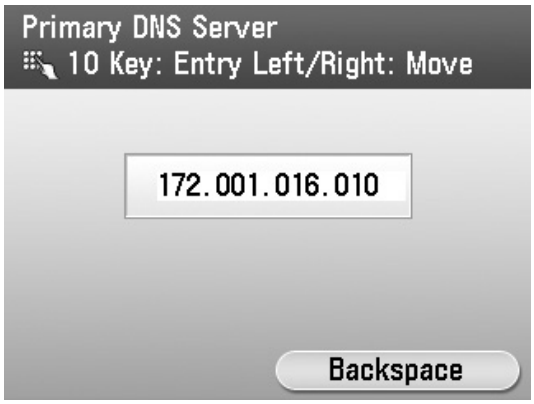
F-12-38

b. Select [Primary DNS Server] and press [OK] button.



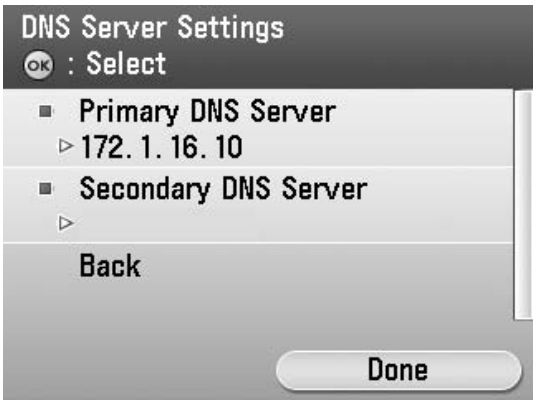
F-12-39

c. Based on the result obtained in "(2) Advance preparations - Information item 2", make the primary DNS server setting and press [OK] button.



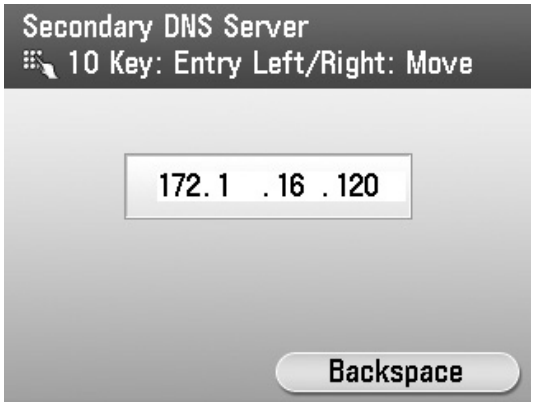
F-12-40

d. There is Secondary DNS Server where in user network, select [Secondary DNS Server] and press [OK] button.



F-12-41

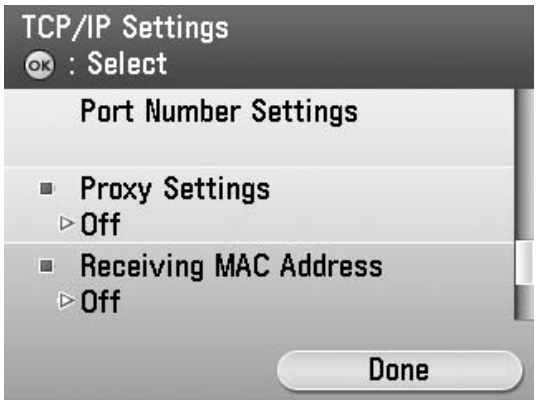
e. Based on the result obtained in "(2) Advance preparations - Information item 2", make the Secondary DNS server setting and press [OK] button.



F-12-42

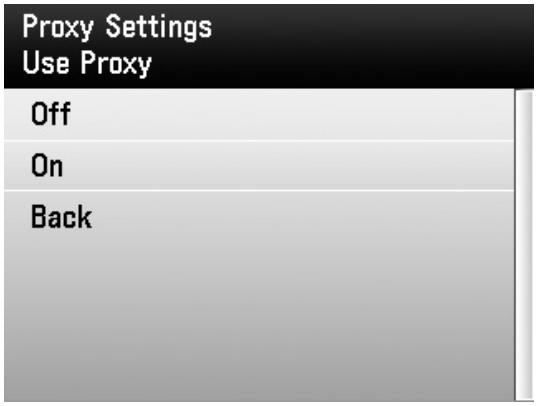
f. Press [Back] button.
g. Press [Done] button to return to the IPv4 setting screen.
h. Press [Done] button to return to the TCP/IP setting screen.

4) Proxy Settings
a. Select [Proxy Settings] and press [OK] button.



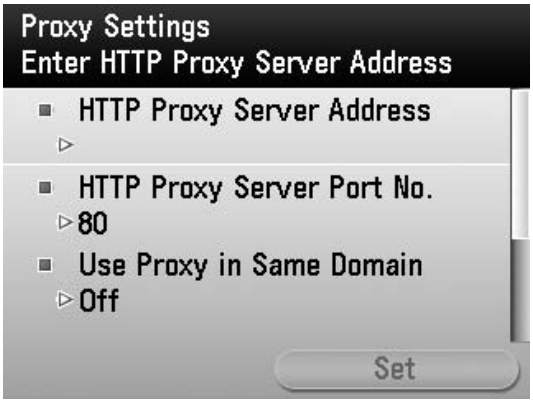
F-12-43

b. Based on the result obtained in "(2) Advance preparations - Information item 3", there is proxy server in user network, select [On] and press [OK] button.



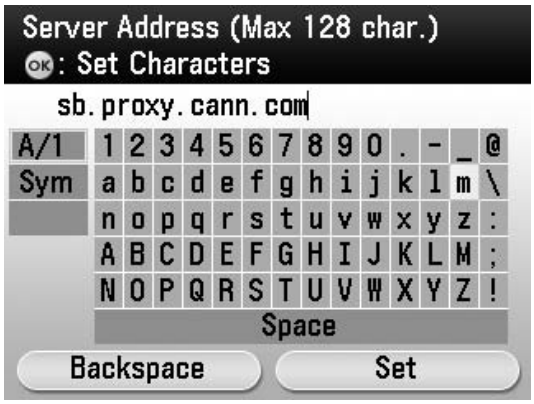
F-12-44

c. Select [HTTP Proxy Server Address] and press [OK] button.



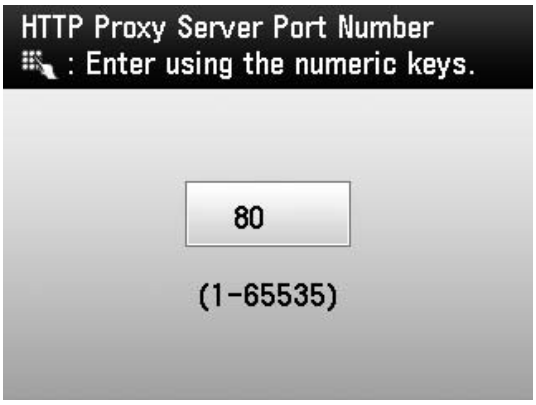
F-12-45

d. Based on the result obtained in "(2) Advance preparations - Information item 3", enter the proxy server address and Press [Set] button.



F-12-46

e. Enter the port number and press [OK] button.

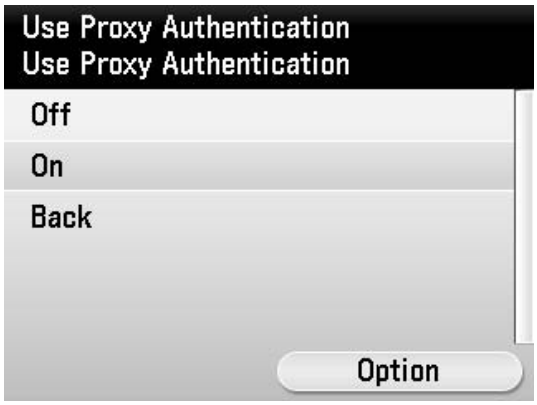


F-12-47

f. Select [Use Proxy Authentication] if proxy authentication is required and press [OK] button.

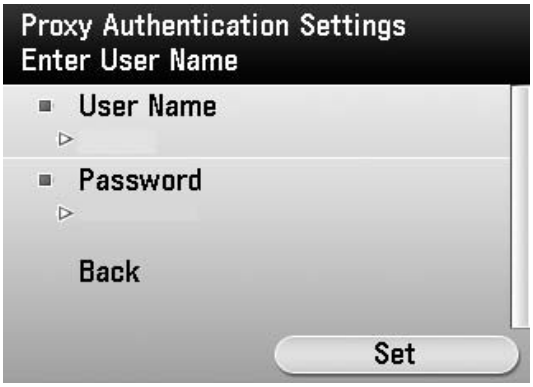
F-12-48

g. Select [On] and press [Option] button.



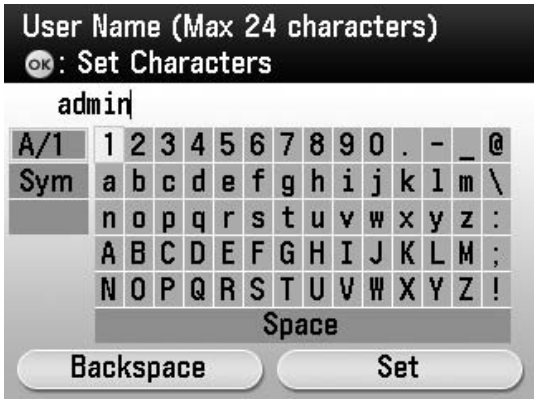
F-12-49

h. Select [User Name] and press [OK] button.



F-12-50

i. Enter a user name for authentication and press [Set] button.

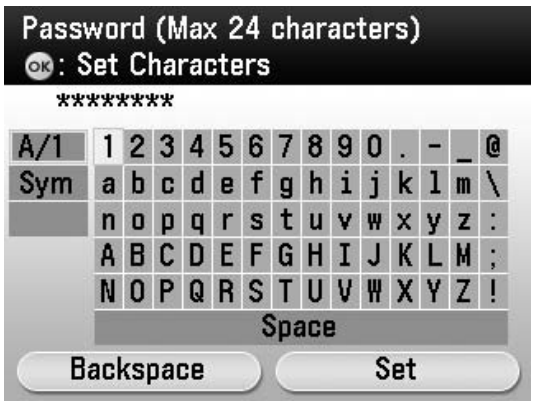


F-12-51

j. Select [Password] and press [OK] button.

F-12-52

k. Enter the password and press [Set] button.



F-12-53

l. Press [Set] button.

F-12-54

m. Press [Set] button.
n. Press [Reset] button to exit Additional function.
o. Turn OFF/ON the power of the host machine.

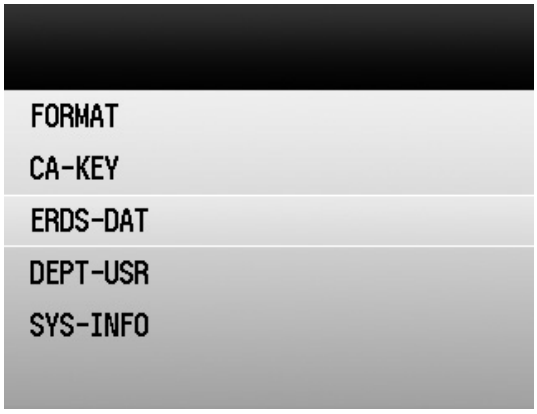
CAUTION:
If you have changed the foregoing network settings, restart the device.

Steps to E-RDS settings

1. Start [Service Mode].
   1) Press [Main Menu] button on the control panel.
   2) Press [2] button on the control panel.
   3) Press [8] button on the control panel.
   4) Press [Main Menu] button on the control panel.

2. Select [COPIER] > [Function] > [CLEAR] > [ERDS-DAT] and press [OK] button.

> **NOTE:**
> This operation initializes the E-RDS settings to factory setting values.
> For the setting values to be initialized, see the section of "Initializing E-RDS settings".



F-12-55

3. Install or delete the CA certificate as required, and restart the device.
   - Installation of CA certificate: Install it from RemoteUI.
   - Deletion of CA certificate: The CA certificate installed at the time of shipment is automatically installed by going through the following steps.

> **CAUTION:**
> After following procedure, the registered key and CA certificate are deleted, and only the CA certificate installed at the time of shipment is registered.
> It is therefore necessary to check with the user in advance.

   (1) Start service mode.
   (2) Select [COPIER] > [Function] > [CLEAR] > [CA-KEY] and press [OK] button.
   (3) Reboot the device.

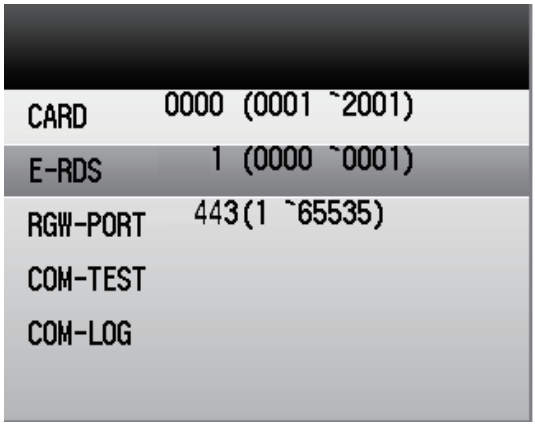
> **CAUTION:**
> If a key and a CA certificate have been registered in order to use a function other than E-RDS, it is necessary to register again from RemoteUI.

4. Start service mode.

5. Select [COPIER] > [Function] > [INSTALL] > [E-RDS] and press [OK] button.

6. Enter [1] and press [OK] button.

> **NOTE:**
> This operation enables the communication function with UGW.



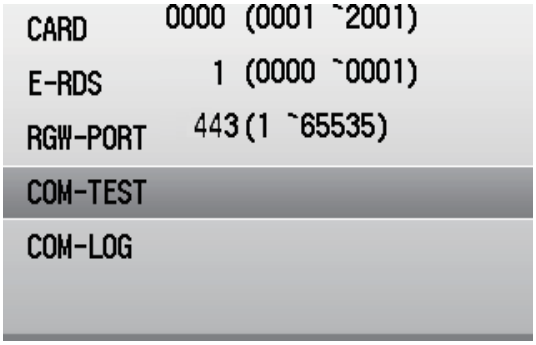
F-12-56

CAUTION:
Do not change the setting values of URL (RGW-ADR) and port number (RGW-PORT) of UGW unless specifically instructed.
Changing the values results in an error in communication with UGW.

7. Select [COM-TEST] and then press [OK] button.

NOTE:
This initiates the communication test between the device and the UGW.

If the communication is successful, "OK" is displayed. If "NG" (failed) appears, refer to the "Troubleshooting" and repeat until "OK" is displayed.



F-12-57

NOTE:
The communication results with UGW can be distinguished by referring to the COM-LOG. By performing the communication test with UGW, E-RDS acquires schedule information and starts monitoring and meter reads operation.

Steps to Service Call button settings
If a user presses Service call button when corrupt image, paper jam, or/and other problems has occurred, E-RDS generates an alarm and notifies it to UGW.
Moreover, E-RDS also notifies cancellation and the completion of the request

<< Steps for settings to display the service call button >>
In the case of supporting a service by the service call button, follow the instructions described below to display the service call button.
1. Start service mode.
   For the procedures, see "Steps to E-RDS settings - step 1.".
2. Select [COPIER] > [Option] > [USER] > [SCALL-SW] and press [OK] button.
3. Enter [1] and press [OK] button.

> **NOTE:**
> Press [Counter Check] button on the left side of the Control Panel to display the counter check screen.
> When the function is enabled, the [Menu] button is displayed on the bottom of this screen. When this button is pressed, [Maintenance] button appears.

<< Steps for settings of service call completion >>
When the service technician completes the work for the service call, follow the instruction as described below to execute the service call completion work.
1. Start service mode.
   For the procedures, see "Steps to E-RDS settings - step 1.".
2. Select [COPIER] > [Option] > [USER] > [SCALLCMP] and press [OK] button.

> **NOTE:**
> E-RDS generates an alarm of service call completion at this timing, and sends the alarm to UGW.

<< Steps for service call request >>
Users should follow the instructions as described below to request a service call.
1. Press [Counter Check] button on the left side of the Control Panel to display the counter check screen, and press [Menu] button.
2. Press the [Maintenance] button.

> **CAUTION:**
> When a service call has been already requested, another service call cannot be sent.
> The previous service call needs to be canceled, or a service person needs to perform processing for service call completion.

3. Select the request details and press [Request] button.
4. The confirmation screen appears. Press [Yes] button to complete the request procedure.

> **NOTE:**
> E-RDS generates an alarm of service call request at this timing, and sends the alarm to UGW.

<< Steps for service call cancellation >>
To cancel the service call, follow the instructions as described below.
1. Press [Counter Check] button on the left side of the Control Panel to display the counter check screen, and press [Menu] button.
2. Press [Maintenance] button.
3. Press [Cancel Request] button, and press [Yes] button in the check screen.

> **NOTE:**
> E-RDS generates an alarm of service call cancellation at this timing, and sends the alarm to UGW.

Initializing E-RDS settings
It is possible to return E-RDS Settings to factory-shipments value.

<< Initialization procedure >>
1. Start service mode.
   For the procedures, see "Steps to E-RDS settings - step 1.".
2. Select [COPIER] > [Function] > [CLEAR] > [ERDS-DAT] and press [OK] button.

<< Setting values and data to be initialized >>
The following E-RDS settings, internal data, and Alarm filtering information are initialized.
- COPIER > Function > INSTALL > E-RDS
- COPIER > Function > INSTALL > RGW-ADR
- COPIER > Function > INSTALL > RGW-PORT
- COPIER > Function > INSTALL > COM-LOG

CAUTION:
In case of replacing the CA certificate file, even if initialization of E-RDS is executed, the status is not returned to the factory default.
When installing the certificate file other than the factory default CA certificate file, it is required to delete the certificate file after E-RDS initialization and install the factory default CA certificate file.
For detailed procedures, see "Steps to E-RDS settings - step 3.".

COM-LOG Report
A report of communication error log information on five affairs can be output.

<< Report output procedure >>
1. Start service mode.
   For the procedures, see "Steps to E-RDS settings - step 1.".
2. Select [COPIER] > [Function] > [MISC-P] > [OUT-PUT] > [ERDS-COM], and press [OK] button.

Output example:

T-12-2

```
01/17 2009 10:14
                        ************************
                        *** E-RDS-COM-LOG ***
                        ************************

No.01  DATE 05 18 2009 TIME 03:21 CODE 05000003
  Information    SUSPEND: Communication test is not performed.

No.02  DATE 05 18 2009 TIME 03:21 CODE 00000000
  Information    SUSPEND: mode changed.

No.03  DATE 05 18 2009 TIME 03:18 CODE 05000003
  Information    SUSPEND: Communication test is not performed.

No.04  DATE 05 18 2009 TIME 03:18 CODE 00000000
  Information    SUSPEND: mode changed.

No.05  DATE 05 18 2009 TIME 01:56 CODE 05000003
  Information    SUSPEND: Communication test is not performed.
```

12.1.8 FAQ

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

No.1
Q: In what case does a communication test with UGW fail?
A: The following cases can be considered in the becoming "NG!" case.
1. Name resolution was failed due to an incorrect host name or DNS server has been halted.
2. Network cable is blocked off.
3. Proxy server settings is not correct.

No.2
Q: I want to know the interval of data transmitting from E-RDS to the UGW, and what data size is sent to the UGW?
A: The schedule of data transmitting, the start time are determined by settings in the UGW side.
The timing is once per 16 hours by default, and counter data volume could be maximum 250 bytes.

No.3
Q: Does error-retry carry out at the time of a communication error with the UGW?
A: Retry of SOAP communication is performed as follows.
- In the case of an error in SOAP communication (i.e. a trouble at UGW side) at transmission of the alarm code list and the service mode counter (postAlert) due to change of device status, the data failed in transmission equivalent to 3 retries is to be stored in the HDD. In the case of anther transmission error (the 4th error), the oldest data of the stored data is deleted and the newly-generated retry data is stored in the HDD.
- In the case of SOAP transmission errors as described below, the unsent (and remaining) data is sent again depending on the storage status of CPCA data:
  - At transmission of a jam log and service mode counter (postJamLog) when the jam log was obtained from the device.
  - At transmission of a service call log and service mode counter (postServiceCallLog) when the service log was obtained from the device.
  - At transmission of an alarm log and service mode counter (postAlarmLog) when the alarm log was obtained from the device.

NOTE:
The retry data will be sent at interval of 5*n minutes. (n: retries, 5, 10, 15 minutes...up to 30 minutes)

No.4
Q: How many log-data can be stored?
A: Up to 30 log data can be saved. The data size of error information is maximum 128 characters.

No.5
Q: Although Microsoft ISA as a proxy server is introduced, the authentication check is failed. Can E-RDS adopt with Microsoft ISA?
A: E-RDS must comply with "Basic" while "Integrated" authentication is used for Microsoft ISA (as default); therefore, authentication with E-RDS is available if you change the setting to "Basic" authentication on the server.

No.6
Q: Can I turn the device power off during the e-Maintenance/ imageWARE Remote system operation?
A: While operating the e-Maintenance/ imageWARE Remote system, the power of the device must be ON. If power OFF is needed, do not leave the device power OFF for long time.
It will become "Device is busy, try later" errors if the power supply of network equipment such as HUB is made prolonged OFF.

No.7
Q: How does E-RDS operate while the device is placed in the sleep mode?
A: While being in Real Deep Sleep, and if data to be sent is in E-RDS, the system wakes up asleep, then starts to send the data to the UGW. The system also waits for completion of data transmission and let the device to shift to asleep status again.
However, transition time to the Real Deep Sleep depends on the device, and the transition to sleep won't be done if the next data transmission will be done within 10 minutes.

No.8
Q: Is E-RDS compatible with Section counter (Department counter)?
A: No, E-RDS does not support Section counter.

No.9
Q: Can I make another service call request when I have already requested a service call?
A: No, you cannot make another service call request if you have already made a service call request.
Touch the [Cancel] button to cancel the service call which you'd made. Or the service technician performs a service call request completion process.

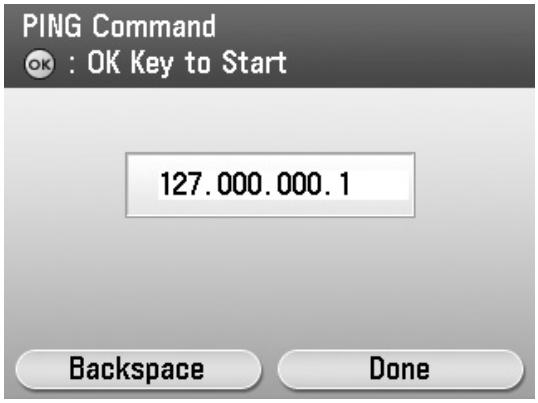
No.10
Q: Is the "Requesting" status cancelled when the device is rebooted?
A: No, the requesting status is not cancelled even if the device is rebooted. The information of the notified service call request (the time that the request was made, the service call request description) is also retained during the "Requesting" status.

12.1.9 Troubleshooting

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

No.1
Symptom: A communication test (COM-TEST) results NG!
Cause: Initial settings or network conditions is incomplete.
Remedy 1:
1) Check network connections
Is the status indicator LED for the HUB port to which the main unit is connected ON?
YES: Proceed to Step 2).
NO: Check that the network cable is properly connected.

2) Confirm loop back address
Select [Additional Functions/ Registration] > [System administration settings] > [Network settings] > [TCP/IP Settings] > [IPv4 Settings] > [PING Command], enter "127.0.0.1", and touch the [OK] button.

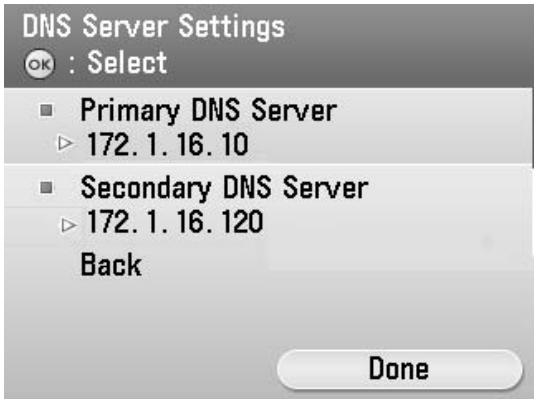


F-12-58

Does the screen display "Response from the host."?
YES: Proceed to Step 3).
NO: There is a possibility that the main unit's network settings are wrong. Check the details of the IPv4 settings once more.

3) Confirmation from another PC connected to same network
Request the user to ping the main unit from a PC connected to same network.
Does the main unit respond?
YES: Proceed to Step 4).
NO: Confirm the details of the main unit's IP address and subnet mask settings.

4) Confirm DNS connection
(a) Select [Additional Functions/ Registration] > [System administration settings] > [Network settings] > [TCP/IP Settings] > [IPv4 Settings] > [DNS Settings] > [DNS Server Address Settings], write down the primary and secondary addresses of the DNS server, and press [Cancel] button.



F-12-59

(b) Press [Cancel] button to return to IPv4 settings.
(c) Select [PING Command], enter the primary DNS server noted down in step (a) as the IP address, and press [OK] button.

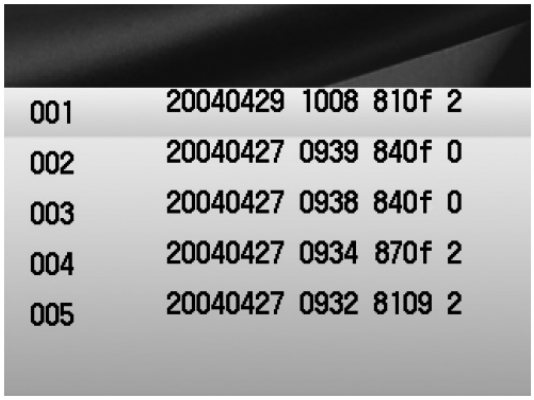
Does the screen display "Response from the host."?
YES: Proceed to Remedy 2.
NO: Enter the secondary DNS server noted down in step (a) as the IP address, and then press [OK] button.

Does the screen display "Response from the host."?
YES: Proceed to Remedy 2.
NO: There is a possibility that the DNS server address is wrong. Reconfirm the address with the user's system administrator.

Remedy 2: Troubleshooting using communication log (COM-LOG)
1) Start [Service Mode].
For the procedures, see "Steps to E-RDS settings - step 1".

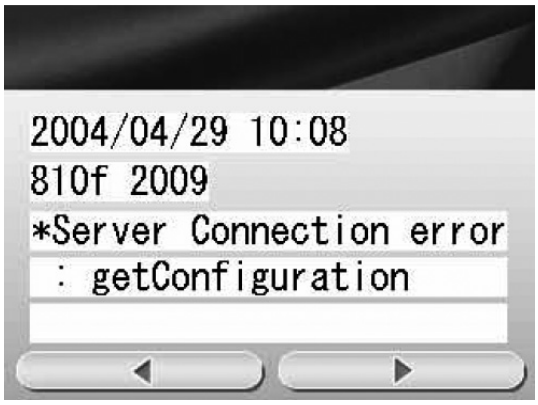
2) When [COPIER] > [Function] > [INSTALL] > [COM-LOG] is selected, the communication log list screen is displayed.

Displayed log is only five latest log.



F-12-60

3) Select log and press [OK] button. The communication log detailed screen is displayed. (Example: No.001)



F-12-61

NOTE:
Press [OK] button to return to the communication log list screen.

4) When a message is displayed, take an appropriate action referring to "Error code and strings".

No.2
Symptom: A communication test results NG! even if network setting is set properly.
Causes: The network environment is inappropriate, or RGW-ADR or RGW-PORT settings for E-RDS have been changed.
Remedy: The following points should be checked.
1) Check network conditions such as proxy server settings and so on.
2) Check the E-RDS setting values.
- Check the communication log from COM-LOG.
- Check whether RGW-ADR or RGW-PORT settings has changed. If RGW-ADR or RGW-PORT settings has changed, restore initial values. For initial values, see "E-RDS setting items".

No.3
Symptom: Registration information of an E-RDS is once deleted from the UGW server, and is re-registered after that. If a communication test is not performed, then device information on the UGW becomes invalid.
Causes: When registration of the E-RDS is deleted from the UGW, the status will be changed to that the communication test has not completed because related information has lost from a database.
So, device information will also become invalid if that condition will be left for seven days without performing the communication test.
Remedy: Perform a communication test before becoming the invalidity state.

No.4
Symptom: There was a log, indicating "Device is not ready, try later" in error details of COM-LOG list.
Cause: A certain problem occurred in networking.
Remedy: Check and take actions mentioned below.
1) Check networking conditions and connections.
2) Turn on the power supply of a device and perform a communication test about 60 seconds later.

No.5
Symptom: "Unknown error" is displayed though a communication test (COM-TEST) has done successfully.
Cause: It could be a problem at the server side or the network load is temporarily faulty.
Remedy: Try again after a period of time. If the same error persists, check the UGW status with a network and UGW administrator.

No.6
Symptom: A service call request cannot be made.
Cause: There has been already a service call request.
Remedy: Perform either of the following remedy works:
- Touch the [Cancel] button to cancel the service call request that has been made.

- A service technician performs a complete processing for the service call request that has been made.

12.1.10 Error code and strings

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The following error information is output in the communication error log details display screen.
(Here, "a server" means UGW.)

The error information are displayed in the following form.
[*] [Error strings] [Method name] [Error details provided by UGW]

NOTE:
"*" is added to the top of the error text in the case of an error in communication test (method name: getConfiguration or communicationTest) only.

T-12-3

No.	Code	Error strings	Cause	Remedy
1	0000 0000	SUSPEND: mode changed.	Unmatched Operation Mode	Clear E-RDS
2	0500 0003	SUSPEND: Communication test is not performed.	Rebooting the device while the communication test had not been performed although E-RDS is enabled.	Perform a communication test (COM-TEST).
3	0xxx 0003	E-RDS switch is setted OFF	A communication test has been attempted with the E-RDS switch being OFF.	Set E-RDS switch (E-RDS) to 1, and then perform a communication test (COM-TEST).
4	0xxx 0003	Server schedule is not exist	Blank schedule data have been received from UGW.	Check the device settings status with the UGW administrator.
5	0xxx 0003	Communication test is not performed	Communication test has not completed.	Perform and complete a communication test (COM-TEST).
6	8000 0002 8000 0003 8000 0101 8000 0201 8000 0305 8000 0306 8000 0401 8000 0403 8000 0414 8000 0415	Event Registration is Failed	Processing (event processing) within the device has failed.	Turn the device OFF/ ON. If the error persists, replace the device system software. (Upgrade)
7	8000 0101	Server response error (NULL)	Communication with UGW has been successful, but an error of some sort has prevented UGW from responding. When (Null) is displayed at the end of the message, this indicates that there has been an error in the HTTPS communication method.	Try again after a period of time. If the error persists, check the UGW status with the UGW administrator.
8	8300 0306	SRAM version unmatch!	Improper value is written in at the head of the Main Controller PCB 2 SRAM domain of E-RDS.	Turn the device OFF/ ON.
9	8xxx 0004	Operation is not supported	Method which E-RDS is not supporting attempted.	Contact help desk
10	8xxx 0201 8xxx 0202 8xxx 0203 8xxx 0204 8xxx 0206	Server schedule is invalid	During the communication test, there has been some kind of error in the schedule values passed from UGW.	When the error occurs, report the details to the support section. And then, after the UGW side has responded, try the communication test again.
11	8xxx 0207 8xxx 0208	Internal Schedule is broken	The schedule data in the inside of E-RDS is not right.	Perform a communication test(COM-TEST).
12	8xxx 0221	Server specified list is too big	Alert filtering error: The number of elements of the list specified by the server is over restriction value.	Specify the number of elements of alert filtering correctly. (Alarm filtering is not supported)
13	8xxx 0222	Server specified list is wrong	Alert filtering error: Unjust value is included in the element of the list specified by the server.	Specify the element of alert filtering with the right value. (Alarm filtering is not supported)
14	8xxx 0304	Device is busy, try later	The semaphore consumption error at the time of a communication test.	Try again a communication test after a period of time.

No.	Code	Error strings	Cause	Remedy
15	8xxx 2000	Unknown error	Some other kind of communication error has occurred.	Try again after a period of time. If the error persists, check the UGW status with the UGW administrator.
16	8xxx 2001	URL Scheme error(not https)	The header of the URL of the registered UGW is not in https format.	Check that the value of URL of UGW (RGW-ADR) is https://a01.ugwdevice.net/ugw/agentif010.
17	8xxx 2002	URL server specified is illegal	A URL different to that specified by the UGW has been set.	Check that the value of URL of UGW (RGW-ADR) is https://a01.ugwdevice.net/ugw/agentif010.
18	8xxx 2003	Network is not ready, try later	Communication attempted without confirming network connection, just after booting up a device in which the network preparations are not ready.	Check the network connection, as per the initial procedures described in the troubleshooting. Perform a communication test (COM-TEST) about 60 seconds later, after turn on the device.
19	8xxx 2004	Server response error ([Hexadecimal]) [Error detailed in the UGW] *1	Communication with UGW has been successful, but an error of some sort has prevented UGW from responding.	Try again after a period of time. Check detailed error code (Hexadecimal) and [Error details in UGW] from UGW displayed after the message.
20	8xxx 200A	Server connection error	TCP/IP communication fault The IP address of device is not set.	Check the network connection, as per the initial procedures described in the troubleshooting.
21	8xxx 200B	Server address resolution error	Server address name resolution has failed.	Check that the value of URL of UGW (RGW-ADR) is https://a01.ugwdevice.net/ugw/agentif010.
22	8xxx 2014	Proxy connection error	Could not connect to proxy server due to improper address.	Check proxy server address and re-enter as needed.
23	8xxx 2015	Proxy address resolution error	Could not connect to proxy server due to name resolution error of proxy address.	Check that the proxy server name is correct. If the proxy server name is correct, check the DNS connection, as per the initial procedures described in the troubleshooting.
24	8xxx 201E	Proxy authentication error	Proxy authentication is failed.	Check the user name and password required in order to login to the proxy, and re-enter as needed.
25	8xxx 2028	Server certificate error	No route certificate installed in device. Certificate other than that initially registered in the user's operating environment is being used, but has not been registered with the device.	Install the latest device system software. (Upgrade)
26	8xxx 2029	Server certificate verify error	The server certificate verification error occurred.	Check that the value of URL of UGW (RGW-ADR) is https://a01.ugwdevice.net/ugw/agentif010.
27	8xxx 2046	Server certificate expired	The route certificate registered with the device has expired. Certificate other than that initially registered in the user's operating environment is being used, but has not been registered with the device. The device time and date is outside of the certificated period.	Check that the device time and date are correctly set. If the device time and date are correct, upgrade to the latest system software.
28	8xxx 2047	Server response time out	Due to network congestion, etc., the response from UGW does not come within the specified time. (HTTPS level time out)	If this error occurs when the communication test is being run or Service Browser is being set, try again after a period of time.
29	8xxx 2048	Service not found	There is a mistake in the UGW URL, and UGW cannot be accessed. (Path is wrong)	Check that the value of URL of UGW (RGW-ADR) is https://a01.ugwdevice.net/ugw/agentif010.
30	8xxx 2052	URL error	The data which is not URL is inputted into URL field.	Check that the value of URL of UGW (RGW-ADR) is https://a01.ugwdevice.net/ugw/agentif010.
31	8xxx 2063	SOAP Fault	SOAP communication error has occurred.	Check that the value of port number of UGW (RGW-PORT) is 443.

No.	Code	Error strings	Cause	Remedy
32	xxxx xxxx	Device internal error	An internal error, such as memory unavailable, etc., has occurred during a device internal error phase.	Turn the device OFF/ ON. Or replace the device system software. (Upgrade)
33	xxxx xxxx	SUSPEND: Initialize Failure!	Internal error occurred at the initiating E-RDS.	Turn the device OFF/ ON.

*1. [Hexadecimal]: indicates an error code returned from UGW.
[Error details in UGW]: indicates error details returned from UGW.

Chapter 13 Maintenance and Inspection

Contents

13.1 Periodically Replaced Parts 13-1
13.1.1 Periodically Replaced Parts 13-1
13.2 Consumables 13-1
13.2.1 Expected Service Life of Consumable Parts 13-1
13.3 Periodical Service 13-1
13.3.1 Periodic Service 13-1

13.1 Periodically Replaced Parts

13.1.1 Periodically Replaced Parts

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

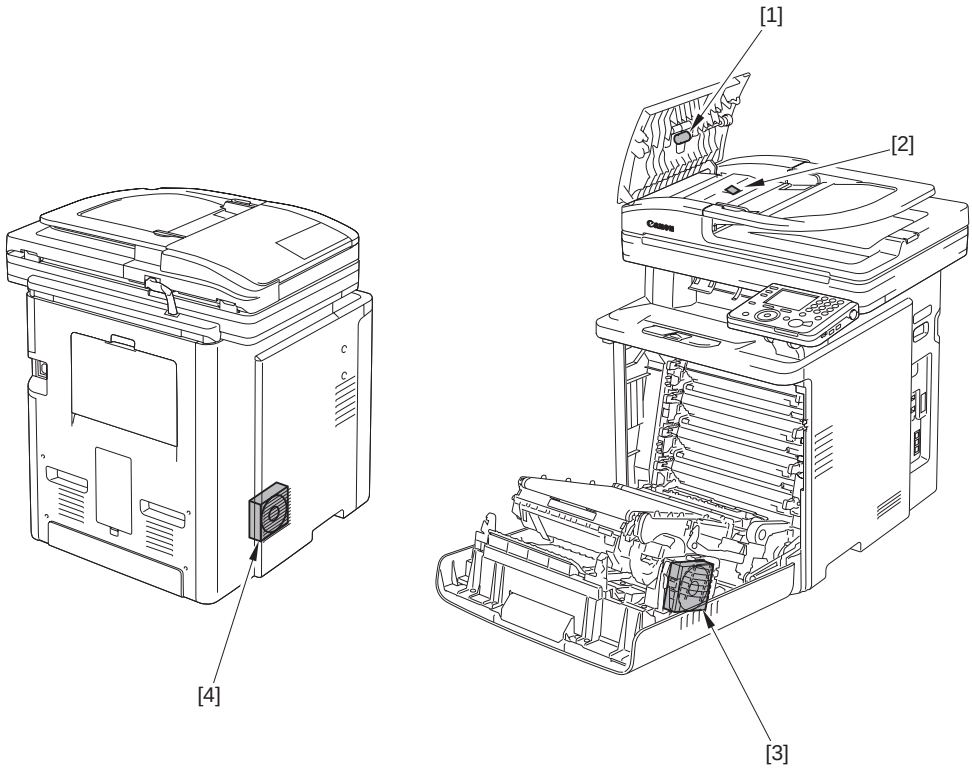
This machine does not have parts that require periodical replacement.

13.2 Consumables

13.2.1 Expected Service Life of Consumable Parts

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Some parts of the machine are likely to require replacement once or more because of wear or damage. Replace them when they are found to be faulty by referring to the following table:



F-13-1

T-13-1

No.	Parts name	Parts No.	Q'ty	Replacement Timing
[1]	ADF separation roller	FL2-6637	1	50,000 sheets
[2]	ADF separation pad	FC7-6297	1	50,000 sheets
[3]	Duplex fan	RK2-0954	1	25,000 hours
[4]	Main body fan	RK2-0954	1	25,000 hours

*: The estimated life in the case of continuous power distribution at 24 hours/day for 25,000 hours is nearly equivalent to 3 years.
(It is nearly equivalent to 5 years in the case of power distribution at 14 hours/day.)

13.3 Periodical Service

13.3.1 Periodic Service

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

This machine does not have parts that require periodic servicing.

Chapter 14 Measurement and Adjustments

Contents

14.1 Scanning System 14-1
14.1.1 Procedure after Replacing the Copyboard Glass 14-1
14.1.2 Procedure after Replacing the Reader Unit 14-1
14.2 Fixing System 14-1
14.2.1 Checking the Nip Width (fixing pressure roller) 14-1
14.3 Electrical Components 14-1
14.3.1 Procedure after Replacing the DC controller PCB 14-1
14.3.2 Procedure after Replacing the Main Controller PCB 14-1
14.3.3 Procedure after Clearing RAM Data 14-1
14.3.4 Procedure after Replacing the Control Panel 14-2
14.4 ADF 14-2
14.4.1 Outline 14-2
14.4.1.1 Procedure after Replacing the ADF Unit 14-2

14.1 Scanning System

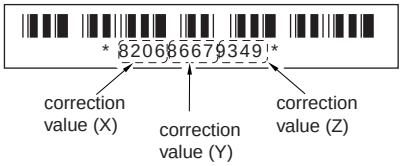
14.1.1 Procedure after Replacing the Copyboard Glass

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

After replacing the copyboard glass, enter the correction values (X, Y, Z) of the standard white plate which are indicated on the back of the new copyboard glass in the service mode.

Correction value (X):
Service mode> COPIER> ADJUST> CCD> W-PLT-X
Correction value (Y):
Service mode> COPIER> ADJUST> CCD> W-PLT-Y
Correction value (Z):
Service mode> COPIER> ADJUST> CCD> W-PLT-Z

Also, rewrite the values in the service book.



F-14-1

14.1.2 Procedure after Replacing the Reader Unit

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

After replacing the reader unit, execute automatic detection of the CCD reading position at ADF stream reading in the following service mode.
COPIER> FUNCTION> INSTALL> STRD-POS

[Operation]
Adjust the reading position by moving the scanner in increments of 0.1 mm.

[Time]
When the lamp is turned on: Adjustment time; 10 seconds
When the lamp is not turned on: Lamp adjustment time; 10 to 30 seconds + Adjustment time; 10 seconds

14.2 Fixing System

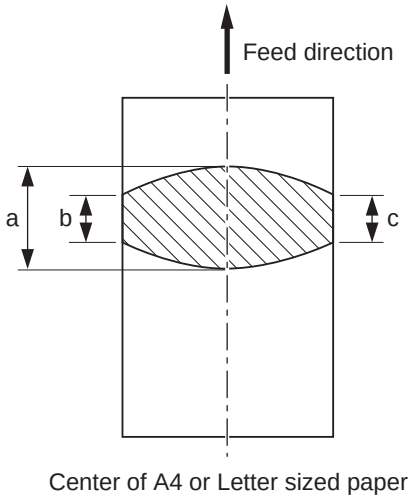
14.2.1 Checking the Nip Width (fixing pressure roller)

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

When removing a paper, be sure to turn on the power supply and remove it after checking that jam has occurred in the machine.
Take notice that removing a paper with no jam occurred in the machine may cause a broken fixing film.

An incorrect nip width may cause the faulty fixing.
Check the nip width by following the procedure below if poor fixing image defect occurs.

1) Make an all solid black print of A4 or Letter size using an toner cartridge same as for this machine, and take the print to the customer's site.
2) Place the solid black print, with the printed side facing DOWN, in the cassette of the printer.
3) Press the test print switch.
4) Open the upper cover as soon as the leading edge of the paper appears in the delivery slot. Leave it for ten seconds.
5) Turn OFF the machine and take fixing unit from the machine. Then take the paper out from the fixing unit.
6) Measure the width of the glossy band across the paper and check that it meets the requirements as shown in Figure.
- Center (a): 8 +/- 1.0 mm
- Difference between right/left and center (a-b, a-c): 0 to 1 mm
- Difference between right and left (|b-c|): 1.5 mm or less



F-14-2

Replace the fixing unit if the nip width is out of specification, since the nip width of the fixing unit is not adjustable in this machine.

14.3 Electrical Components

14.3.1 Procedure after Replacing the DC controller PCB

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

After replacing the DC controller PCB, restore the backup data from the main controller PCB.
1) Using the service mode, restore the backup data of the DC controller stored in NVRAM of the main controller PCB to NVRAM of the DC controller PCB.
COPIER> FUNCTION> VIFFNC> RSTR-DCN
2) Execute "Initial Setting/Registration > Adjustment/Cleaning > Automatic Gradation Correction > Full Correction".

14.3.2 Procedure after Replacing the Main Controller PCB

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

After replacing the main controller PCB with new one, perform the following procedure.

1. Backup the user data
Import the user data using the remote UI.

The machine does not support "Import/export via USB" (provided in the following service SW) because it supports network as standard function.
COPIER->FUNCTION->PARAM->SYS-SW->Bit Switch->SW 02 Bit6

2. Enter the flicker adjustment value of the control panel
1) Using the service mode, check the flicker value of the control panel.
TESTMODE> PANEL> FLICKER CHECK START> FLICKER ADJUST

MEMO:
The flicker adjustment value can be also checked in the spec list (FLICKER ADJ PRM).
How to output the spec list: COPIER> FUNCTION> MISC-P> OUTPUT> SPEC

2) Replace the main controller PCB.
3) Using the service mode, enter the adjustment value checked in Step 1).
TESTMODE> PANEL> FLICKER CHECK START> FLICKER ADJUST
4) Using the user mode, execute automatic gradation correction (full correction).
Initial Setting/Registration> Adjustment/Cleaning> Automatic Gradation Correction> Full Correction

14.3.3 Procedure after Clearing RAM Data

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

After clearing the RAM data (ALL CLEAR) in the main controller PCB, perform the following procedure.

1. Backup the user data
Import the user data using the remote UI.

> The machine does not support "Import/export via USB" (provided in the following service SW) because it supports network as standard function.
> # COPIER->FUNCTION->PARAM->SYS-SW->Bit Switch->SW 02 Bit6

2. Enter the flicker adjustment value of the control panel
1) Using the service mode, check the flicker value of the control panel.
TESTMODE> PANEL> FLICKER CHECK START> FLICKER ADJUST

> **MEMO:**
> The flicker adjustment value can be also checked in the spec list (FLICKER ADJ PRM).
> How to output the spec list: COPIER> FUNCTION> MISC-P> OUTPUT> SPEC

2) Replace the main controller PCB.
3) Using the service mode, enter the adjustment value checked in Step 1).
TESTMODE> PANEL> FLICKER CHECK START> FLICKER ADJUST
4) Using the user mode, execute automatic gradation correction (full correction).
Initial Setting/Registration> Adjustment/Cleaning> Automatic Gradation Correction> Full Correction

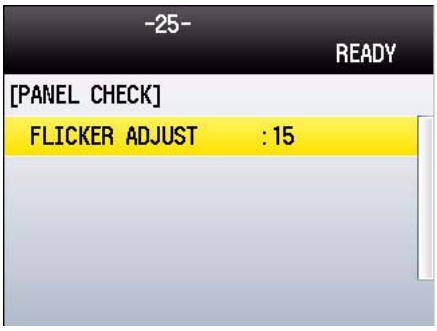
14.3.4 Procedure after Replacing the Control Panel

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

After replacing the control panel, adjust the flicker value of the control panel using the service mode.
1) Using the service mode, make the machine display the flicker value adjustment screen for the control panel.
TESTMODE> PANEL> FLICKER CHECK START

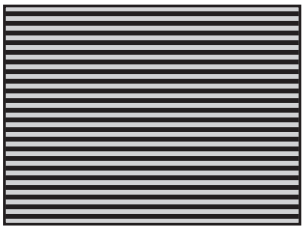
F-14-3

2) Press the [OK] key.
The flicker value entry screen is displayed.



F-14-4

3) Press the [OK] key.
The flicker adjustment pattern (a pattern with horizontal stripes) is displayed in the LCD.
Pressing the right/left arrow keys, search for the area with the minimum flicker.



F-14-5

4) Press the [OK] key.
5) Press the [Back] key.
The service mode operation is terminated.

14.4 ADF

14.4.1 Outline

14.4.1.1 Procedure after Replacing the ADF Unit

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

After replacing the ADF unit, execute automatic detection of the CCD reading position at ADF stream reading in the following service mode.
COPIER> FUNCTION> INSTALL> STRD-POS

[Operation]
Adjust the reading position by moving the scanner in increments of 0.1 mm.

[Time]
When the lamp is turned on: Adjustment time; 10 seconds
When the lamp is not turned on: Lamp adjustment time; 10 to 30 seconds + Adjustment time; 10 seconds

Chapter 15 Correcting Faulty Images

Contents

15.1 Initial Checkup 15-1
15.1.1 Initial Check 15-1
15.2 Test Printing 15-2
15.2.1 Test Printing 15-2
15.3 Outline of Electrical Components 15-6
15.3.1 Clutch/Solenoid 15-6
15.3.1.1 Solenoids 15-6
15.3.2 Motor/Fan 15-7
15.3.2.1 Motors 15-7
15.3.2.2 Fans 15-8
15.3.3 Sensor 15-9
15.3.3.1 Sensors 15-9
15.3.4 Switch 15-11
15.3.4.1 Switches, Speaker, and Thermistors 15-11
15.3.5 PCBs 15-13
15.3.5.1 PCBs 15-13
15.3.6 Location of Convectors 15-15
15.3.6.1 Location of Connectors 15-15

15.1 Initial Checkup

15.1.1 Initial Check

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Check the following items before you diagnose malfunction. If any failure is found, a service engineer is to clear the problem and to give the instruction to a user.

Installation environment
- The power voltage is -/+10 % of the rated voltage.
- The machine is securely installed on a level surface.
- The room temperature is kept between 10 and 30 deg C, and the relative humidity, between 10 and 80 %.
- Avoid sites generating ammonia gas, high temperature or high humidity (near water faucet, kettle, or humidifier), cold places, open flames, dusty area and sites the wind blows in from the air-conditioning duct.
- Avoid sites exposed to direct sunlight. If unavoidable, advise the customer to hang curtains.
- A well-ventilated place.
- Make sure that the power cord is inserted to the machine and the outlet securely.

Paper checks
- The recommended paper for the printer is used.
- Paper is not damp.
- Paper is not dirty.

Paper sets
- The amount of paper in the pick-up source is within specifications.
- Paper is correctly set on the selected pick-up source.
- The size guides are aligned with paper.

Cartridge sets
Make sure the toner cartridges in each color are set in the machine properly.

Fixing unit sets
Make sure the fixing unit is set in the machine properly.

External cover sets
Make sure the front cover is closed securely.

Condensation
During winter, if the machine is brought from a cold place such as a warehouse into a warm room, condensation will appear inside the machine, causing various problems.
Ex.)
a. Condensation in the optical system (polygon mirror, reflective mirror, lens, etc.) will result in a light print image.
b. As the photosensitive drum is cold, the resistance of the photoconductive layer is high; this will lead to incorrect contrast.

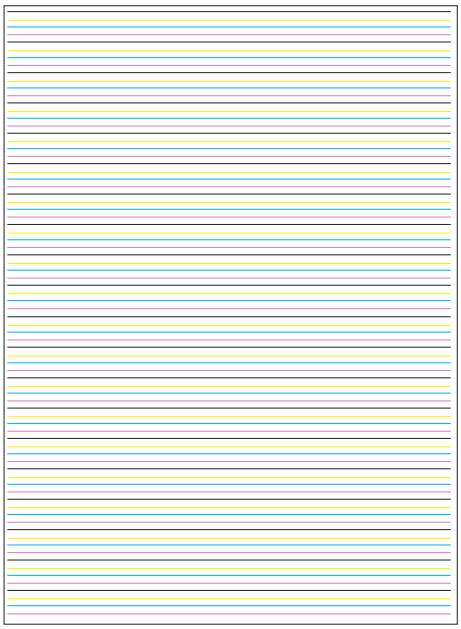
If condensation appears, either wipe the parts with dry cloth, or leave the printer on for 10 to 20 minutes.
If the toner cartridges are opened soon after being moved from a cold room to a warm room, condensation may appear inside the cartridge and may cause various problems.
Be sure to instruct the user that it is necessary to leave the printer for one to two hours at a room temperature to allow it to acclimatize to the temperature.

15.2 Test Printing

15.2.1 Test Printing

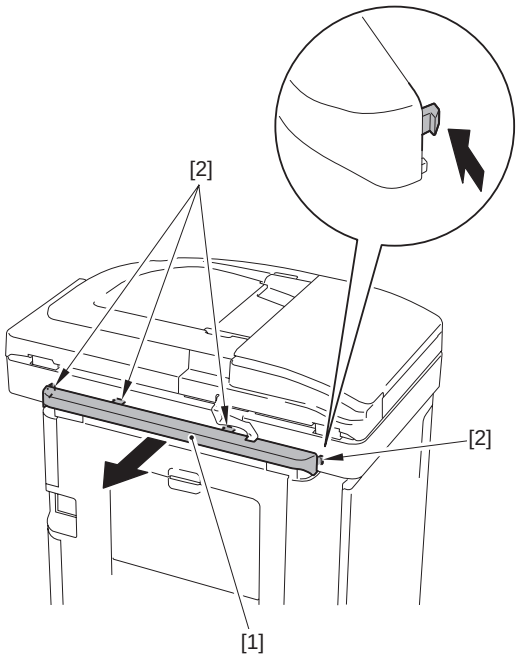
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

You can check with test prints if the printer engine works normally.
When pressing the test print switch at the DC controller PCB with the machine in standby mode, a test pattern (horizontal lines) is printed.
This test print can be executed without the main controller PCB.



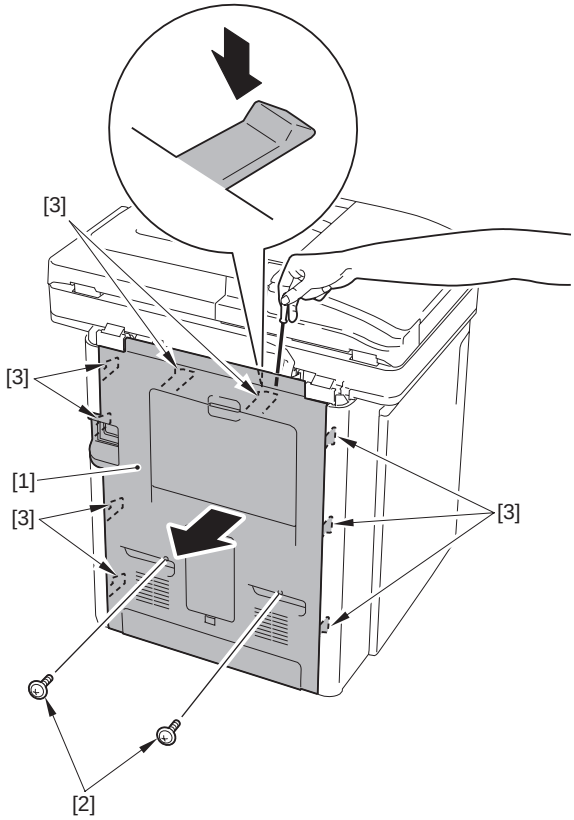
F-15-1

Implementation procedure
1) Remove the reader hinge cover [1].
- 4 claws [2]



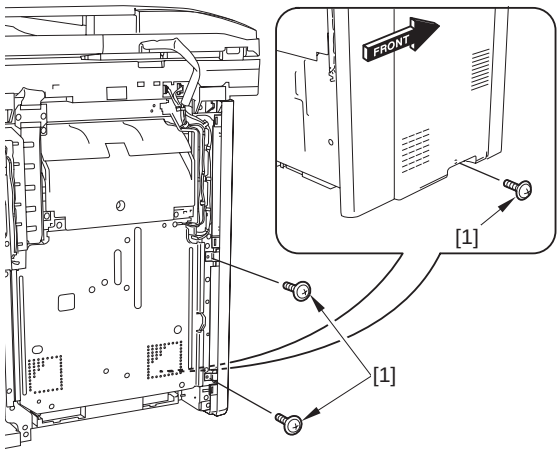
F-15-2

2) Remove the rear cover unit [1].
- 2 screws [2]
- 9 claws [3]



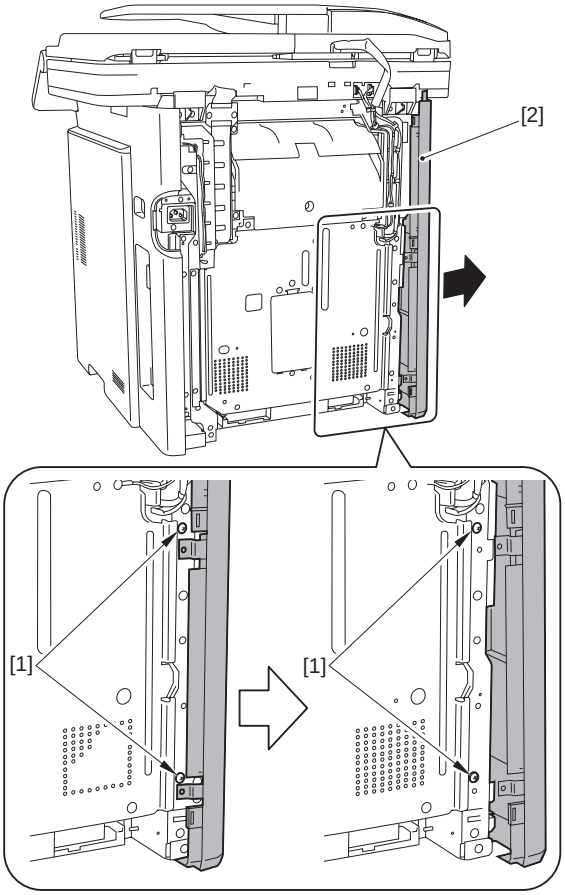
F-15-3

3) Remove the 3 screws [1].



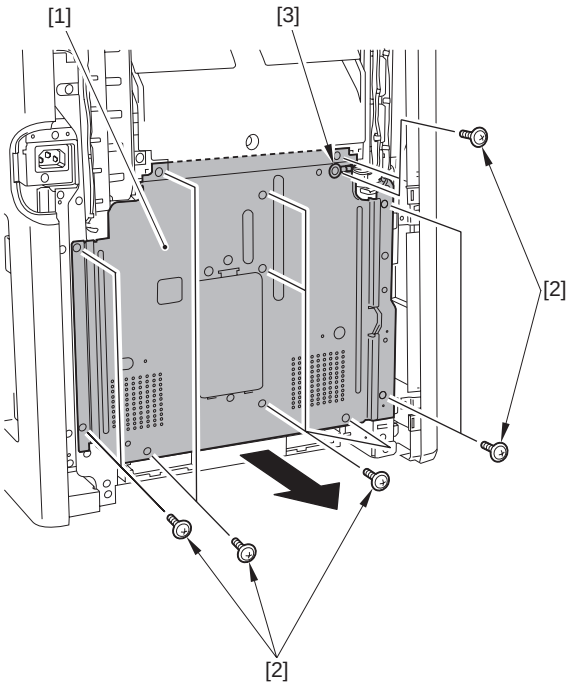
F-15-4

4) Move the left cover [2] to the position where the 2 screws [1] of the power unit cover can be removed.



F-15-5

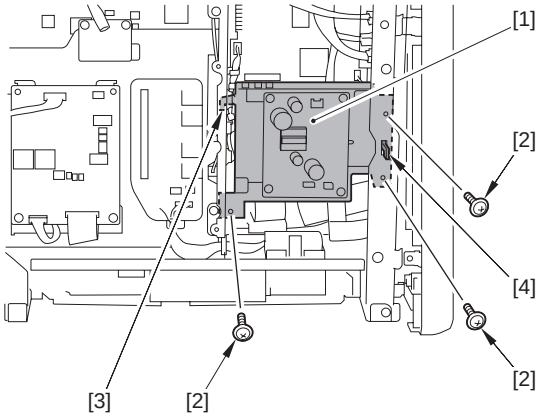
5) Remove the power unit cover [1].
- 12 screws [2]
- 1 terminal [3]



F-15-6

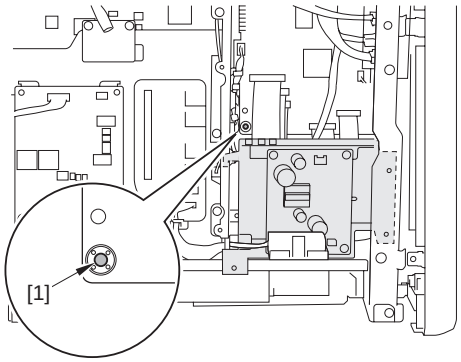
6) Remove the off-hook unit [1] without disconnecting the connector.
- 3 screws (TP; M3X6) [2]
- 1 hook [3]
- 1 hook [4]

> **Points to Note When Removing the Off-Hook Unit**
> Be careful not to pull strongly the cable connected with the off-hook unit and break it. It is enough to move the off-hook unit downward so that the test print switch at the rear side can be seen.



F-15-7

7) Press the test print switch [1].



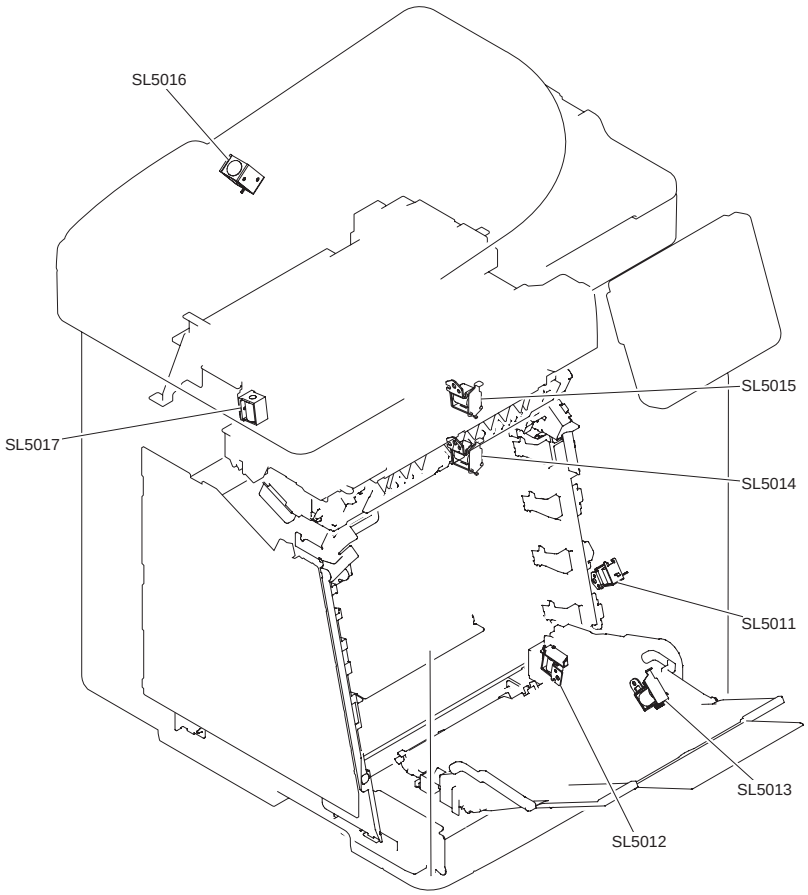
F-15-8

15.3 Outline of Electrical Components

15.3.1 Clutch/Solenoid

15.3.1.1 Solenoids

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-15-9

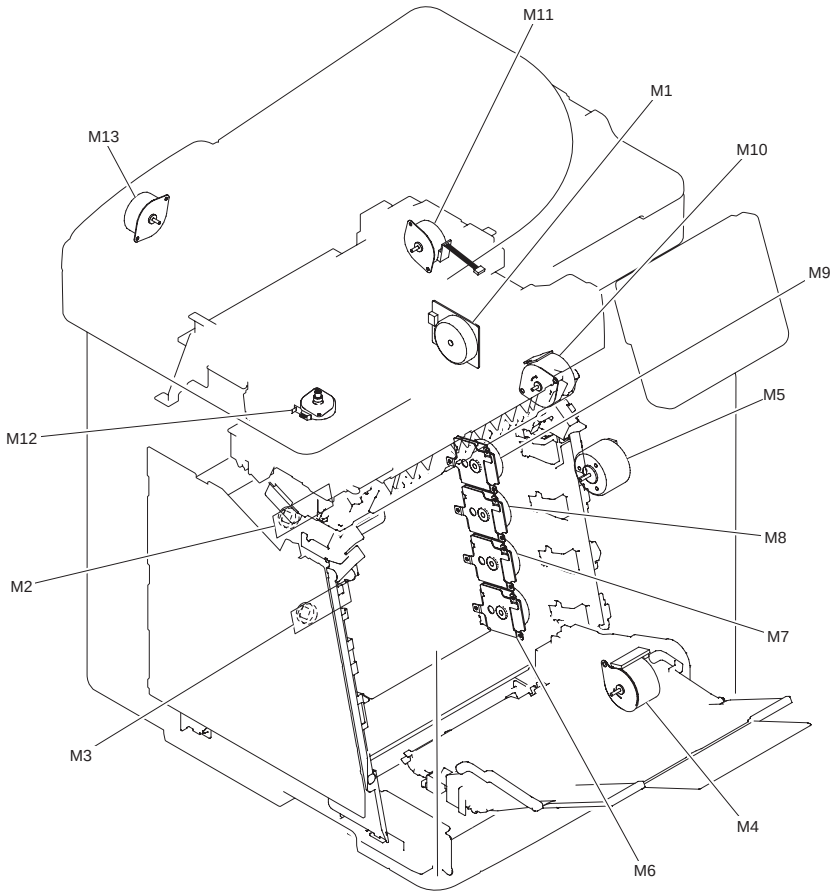
T-15-1

Notation	Name
SL5011	ETB disengagement solenoid
SL5012	cassette pickup solenoid
SL5013	manual pickup solenoid
SL5014	YMC developing disengagement solenoid
SL5015	Bk developing disengagement solenoid
SL5016	ADF delivery solenoid
SL5017	reverse solenoid

15.3.2 Motor/Fan

15.3.2.1 Motors

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



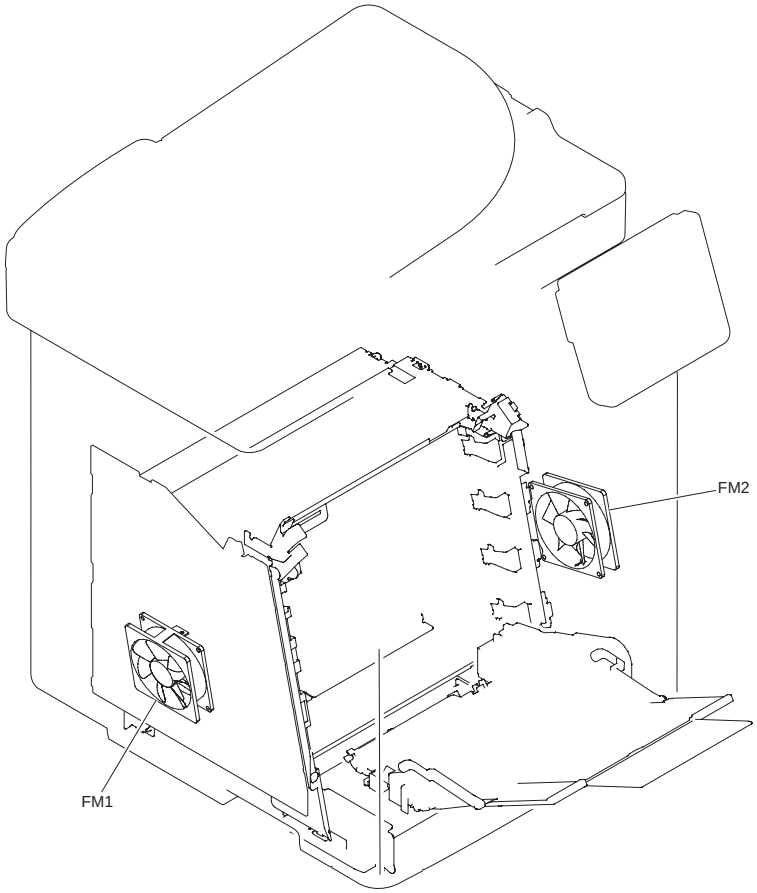
F-15-10

T-15-2

Notation	Name
M1	fixing motor
M2	scanner motor 1
M3	scanner motor 2
M4	pickup motor
M5	ETB motor
M6	M drum motor
M7	C drum motor
M8	Y drum motor
M9	Bk drum motor
M10	duplexing feed motor
M11	reverse motor
M12	reader motor
M13	ADF pickup motor

15.3.2.2 Fans

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-15-11

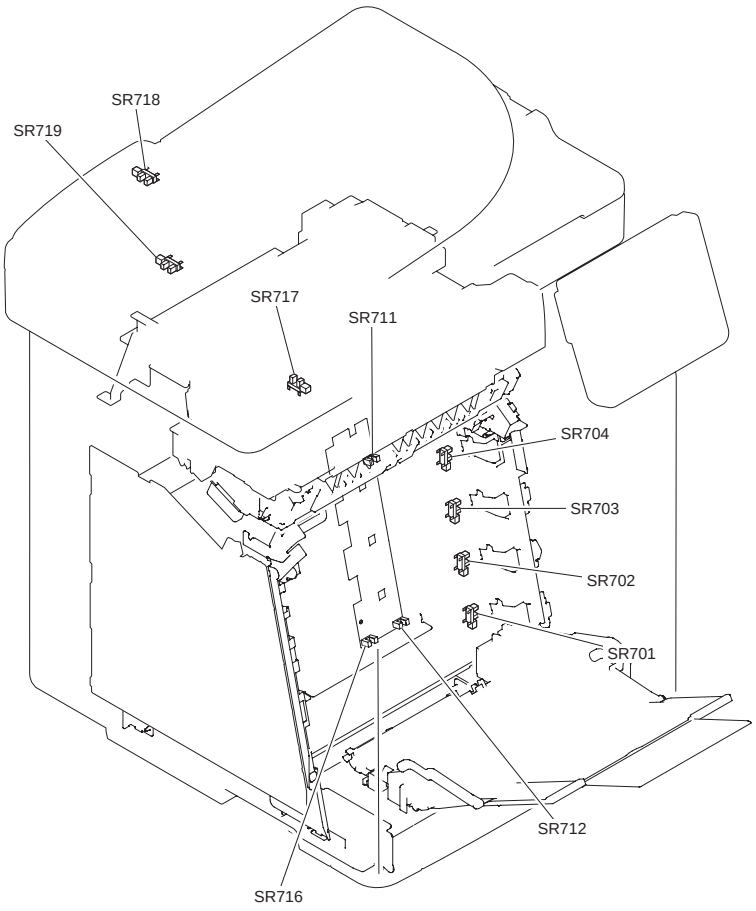
T-15-3

Notation	Name
FM1	main unit fan
FM2	duplex fan

15.3.3 Sensor

15.3.3.1 Sensors

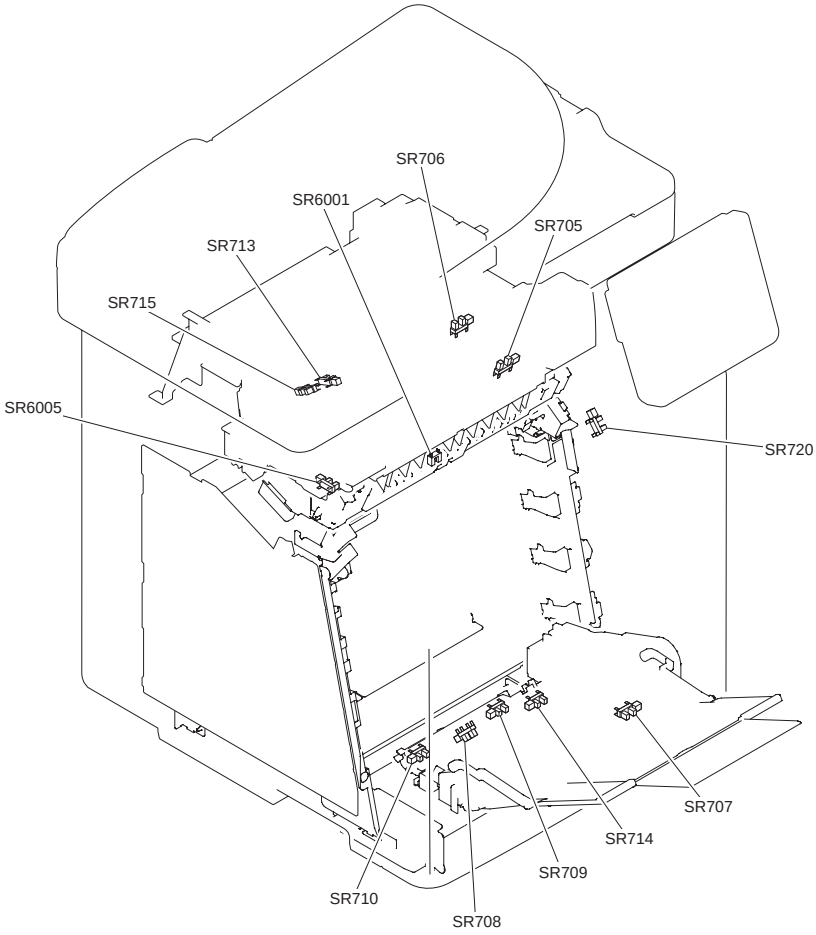
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-15-12

T-15-4

Notation	Name
SR701	M drum HP sensor
SR702	C drum HP sensor
SR703	Y drum HP sensor
SR704	Bk drum HP sensor
SR711	YMC developing disengagement sensor
SR712	Bk developing disengagement sensor
SR716	new cartridge sensor
SR717	reader HP sensor
SR718	ADF paper sensor
SR719	ADF paper trailing edge sensor



F-15-13

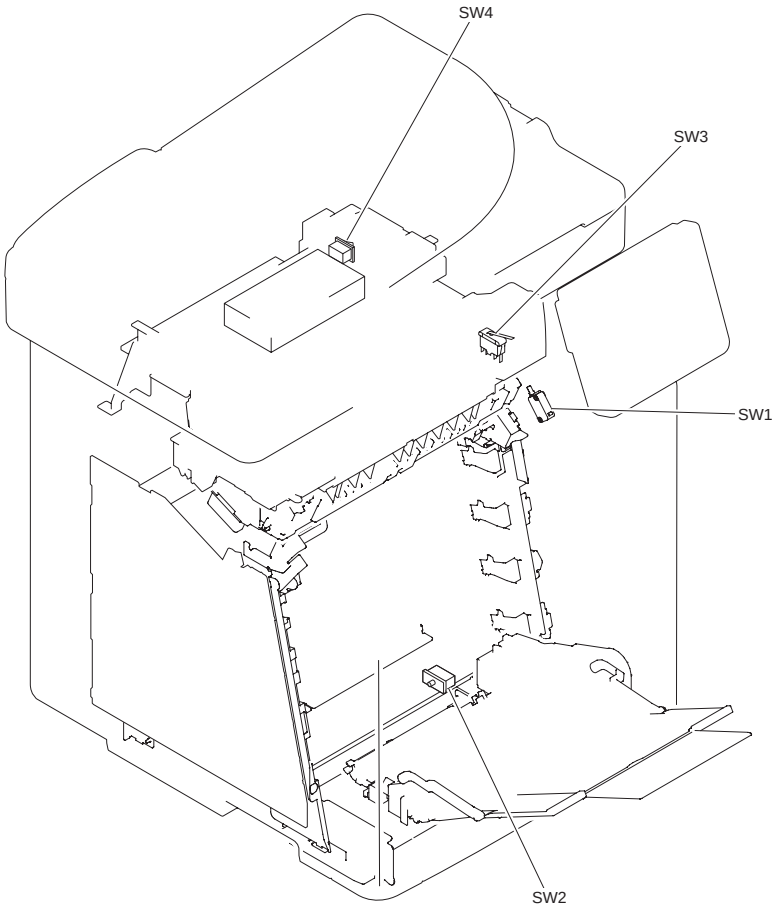
T-15-5

Notation	Name
SR705	fixing pressure release sensor
SR706	reverse sensor
SR707	manual feed paper sensor
SR708	pre-registration sensor
SR709	cassette paper sensor
SR710	registration sensor
SR713	delivery paper full-level sensor
SR714	paper displacement sensor
SR715	delivery sensor
SR720	front cover sensor
SR6001	paper loop sensor
SR6005	fixing delivery sensor

15.3.4 Switch

15.3.4.1 Switches, Speaker, and Thermistors

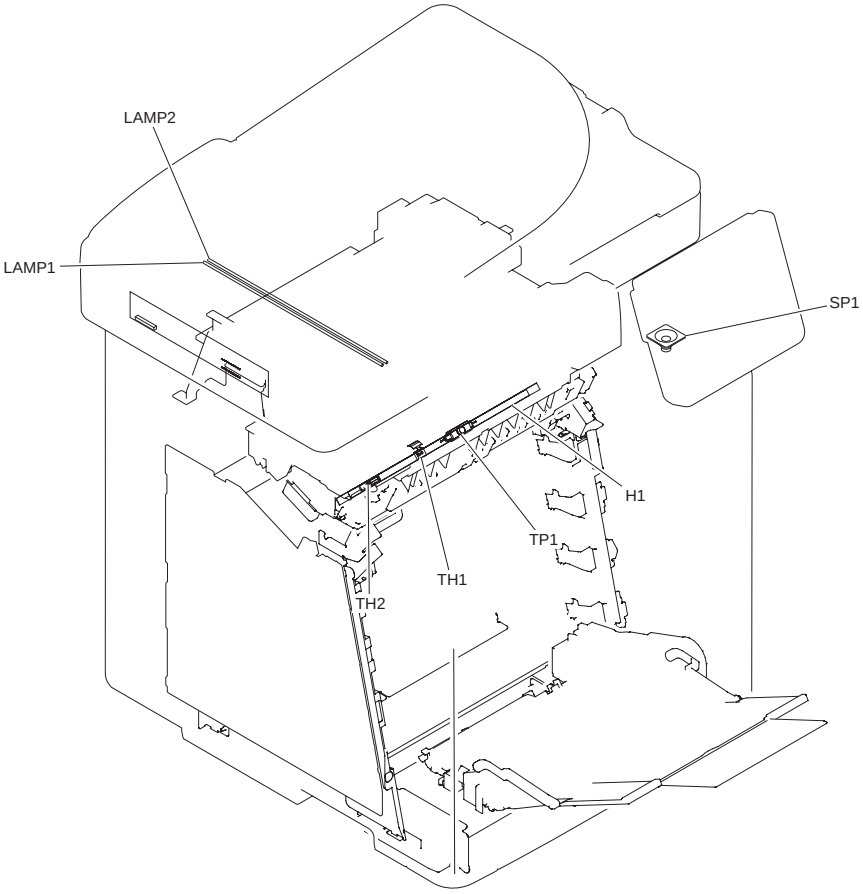
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-15-14

T-15-6

Notation	Name
SW1	front cover detection switch
SW2	cassette detection switch
SW3	delivery cover detection switch
SW4	power switch



F-15-15

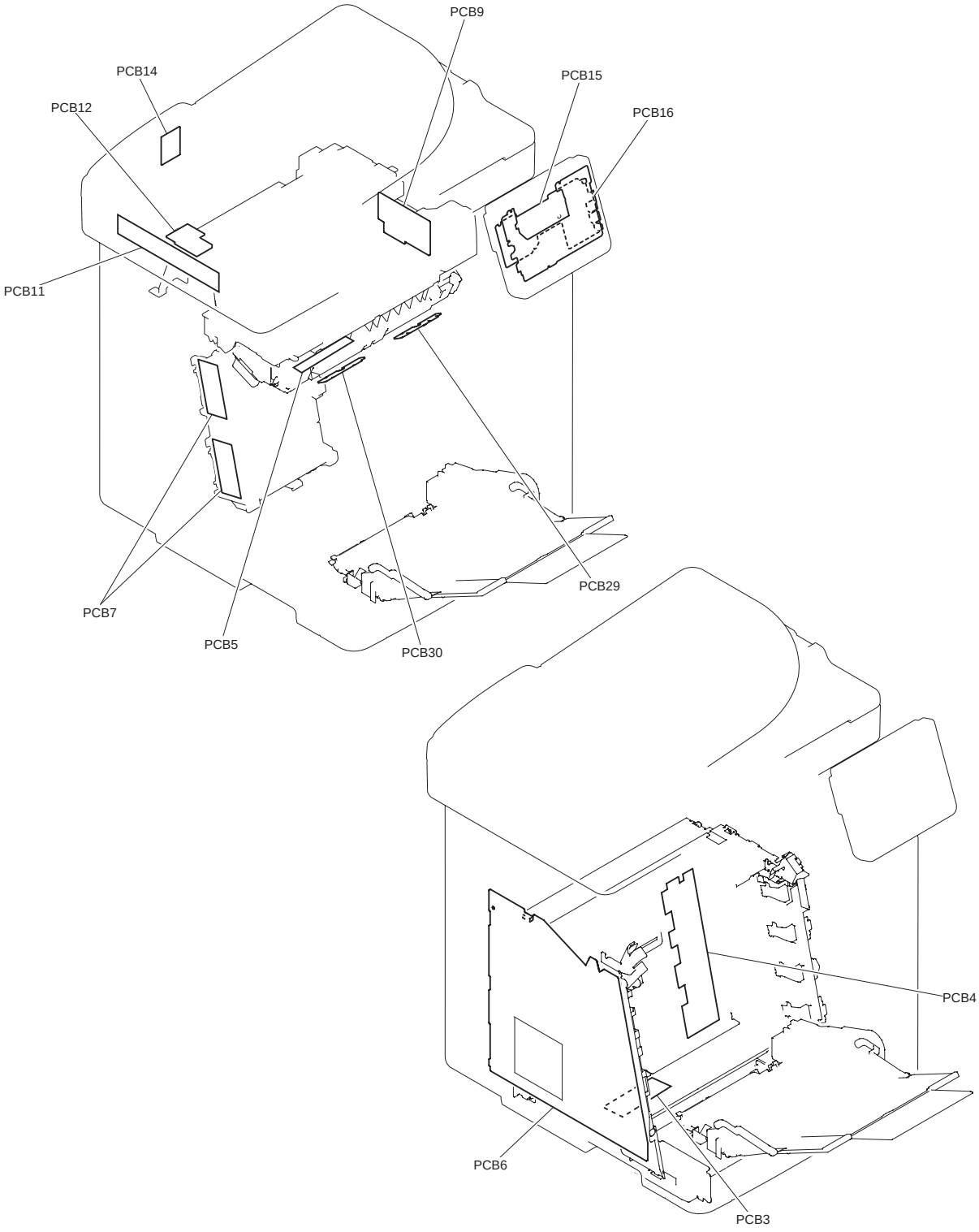
T-15-7

Notation	Name
H1	fixing heater
LAMP1	document lamp
LAMP2	document lamp
SP1	speaker
TH1	fixing main thermistor
TH2	fixing sub thermistor
TP1A	fixing thermal switch

15.3.5 PCBs

15.3.5.1 PCBs

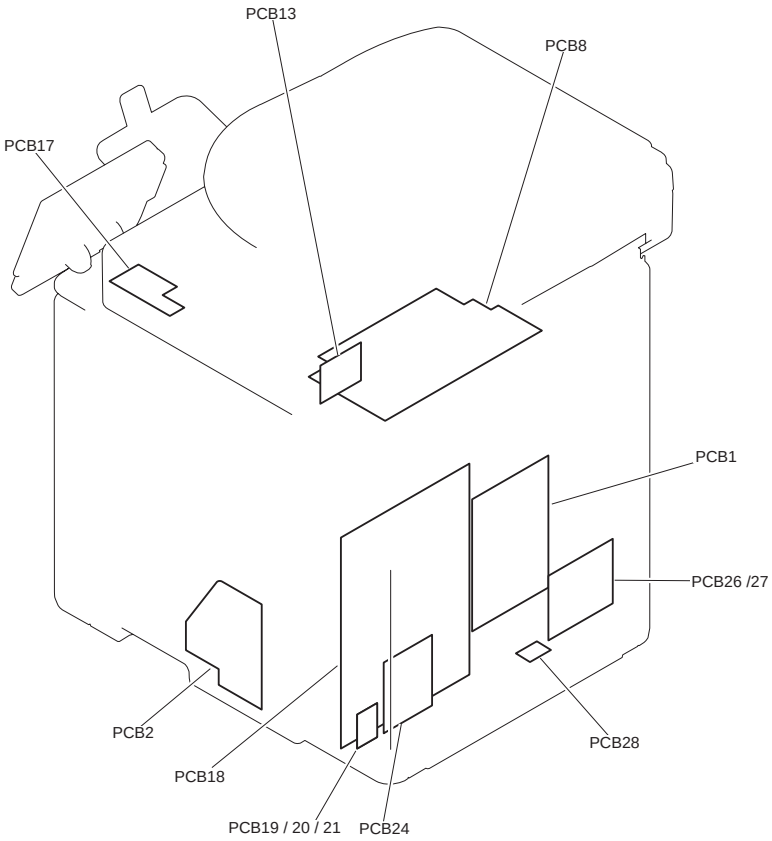
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-15-16

T-15-8

Notation	Name	Notation	Name	Notation	Name
PCB3	pickup relay PCB	PCB4	memory controller PCB	PCB5	fixing relay PCB
PCB6	high-voltage power PCB	PCB7	laser driver PCB	PCB9	reverse driver PCB
PCB11	CCD PCB	PCB12	inverter PCB	PCB14	ADF relay PCB
PCB15	control panel main PCB	PCB16	control panel jog PCB		
PCB29	color displacement/density sensor (right)	PCB30	color displacement/density sensor (left)		



F-15-17

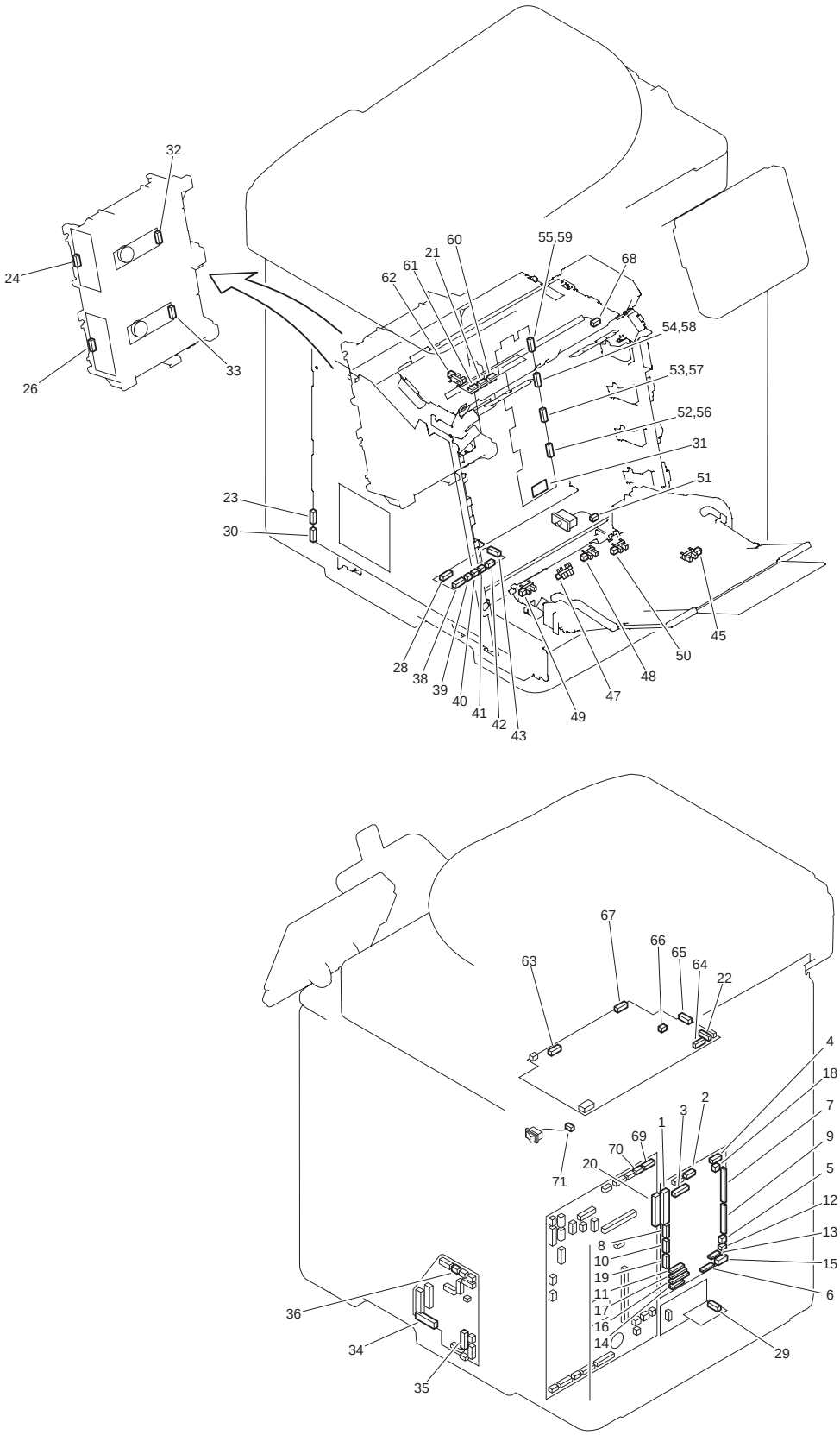
T-15-9

Notation	Name
PCB1	DC controller PCB
PCB2	driver PCB
PCB8	low-voltage power PCB
PCB13	CCD relay PCB
PCB17	control panel relay PCB
PCB18	main controller PCB
PCB19	modular PCB
PCB20	modular PCB
PCB21	modular PCB
PCB24	NCU PCB
PCB26	pseudo CI PCB (for Japan)
PCB27	off hook PCB (for outside Japan)
PCB28	environment sensor

15.3.6 Location of Convectors

15.3.6.1 Location of Connectors

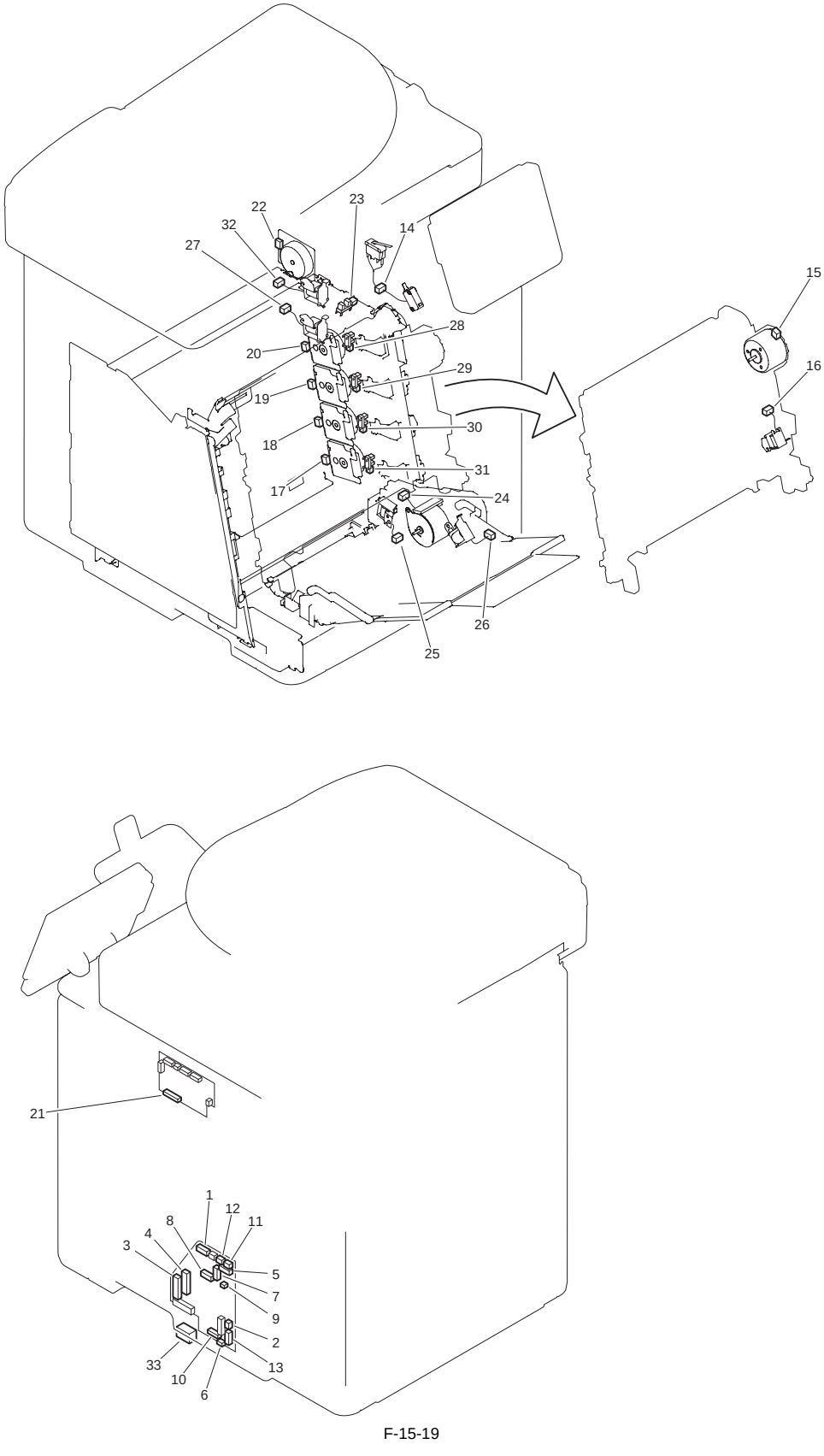
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-15-18

T-15-10

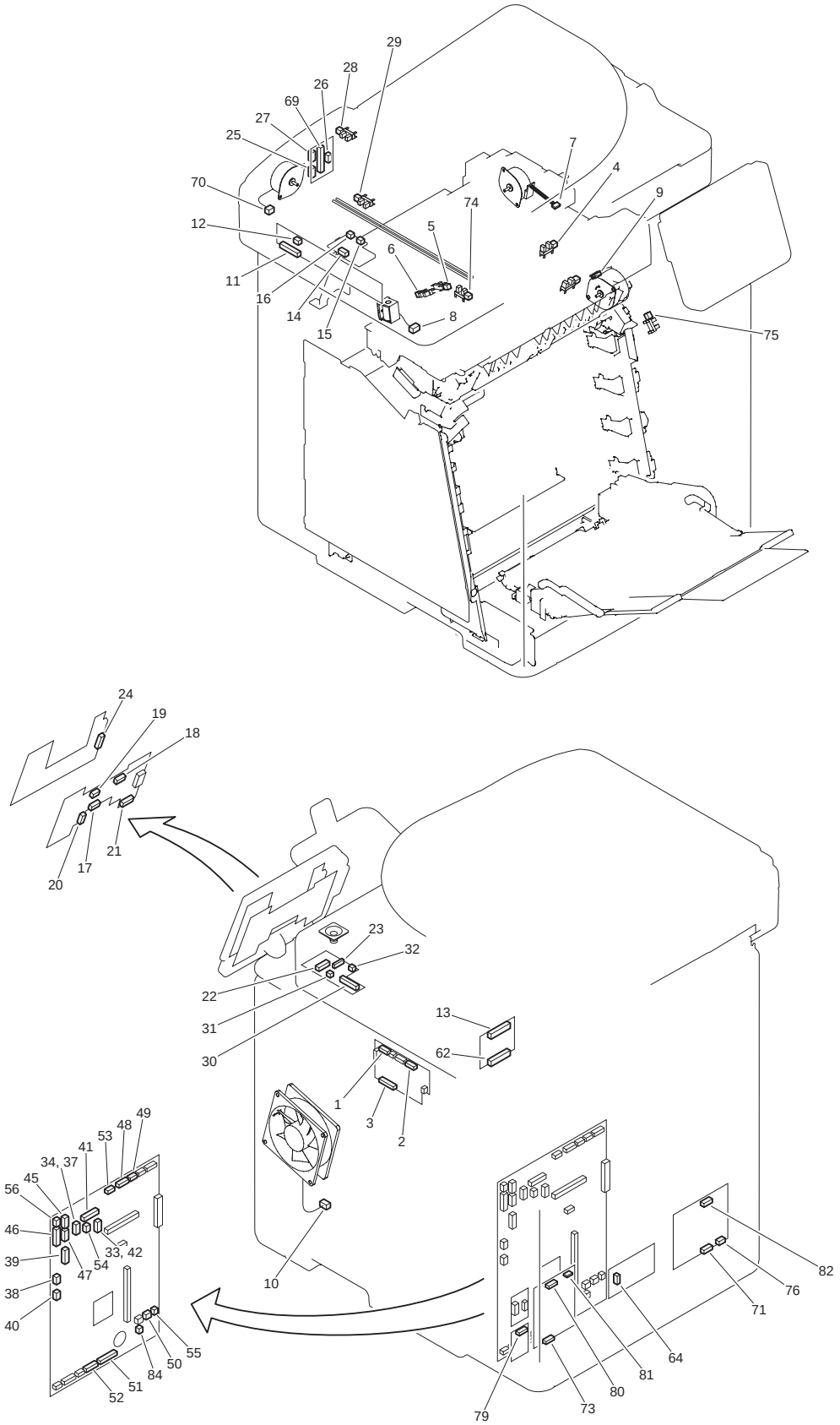
No.	Notation	J No.	Electric parts name	Relay connector		No.	J No.	Notation	Electric parts name	Remarks
1	PCB1	J1001	DC controller PCB			20	J8112	PCB18	main controller PCB	
2	PCB1	J1002	DC controller PCB	J6007		21	J6001	PCB6	fixing relay PCB	
3	PCB1	J1004	DC controller PCB	J5027		22	J3004	PCB8	low-voltage power PCB	
4	PCB1	J1006	DC controller PCB	J5026		4	-	PCB8	low-voltage power PCB	
5	PCB1	J1008	DC controller PCB			5	J1008	FM1	main unit fan	
6	PCB1	J1009	DC controller PCB			23	J2001	PCB6	high-voltage power PCB	
7	PCB1	J1010	DC controller PCB			24	J101	PCB7	laser driver PCB	
9	PCB1	J1012	DC controller PCB			26	J102	PCB7	laser driver PCB	
11	PCB1	J1014	DC controller PCB			28	J7001	PCB3	pickup relay PCB	
12	PCB1	J1018	DC controller PCB			29	J8002	PCB28	environment sensor	
13	PCB1	J1019	DC controller PCB			30	J2002	PCB6	high-voltage power PCB	
14	PCB1	J1020	DC controller PCB			31	J301	PCB4	memory controller PCB	
15	PCB1	J1021	DC controller PCB			32	J5001A	M2	scanner motor 1	
15	PCB1	J1021	DC controller PCB			33	J5001B	M3	scanner motor 2	
16	PCB1	J1022	DC controller PCB			34	J201	PCB2	driver PCB	
17	PCB1	J1023	DC controller PCB			35	J401	PCB2	driver PCB	
18	PCB1	J1024	DC controller PCB			36	J202	PCB2	driver PCB	
38	PCB3	J7002	pickup relay PCB	J504	J503	38	-	PCB29	color displacement/density sensor (right)	
38	PCB3	J7002	pickup relay PCB	J504	J503	38	-	PCB30	color displacement/density sensor (left)	
39	PCB3	J7003	pickup relay PCB			45	J707	SR707	manual feed paper sensor	
40	PCB3	J7004	pickup relay PCB			46	J601	SW1	front cover detection switch	
41	PCB3	J7005	pickup relay PCB			47	J708	SR708	pre-registration sensor	
42	PCB3	J7006	pickup relay PCB			48	J709	SR709	cassette paper sensor	
42	PCB3	J7006	pickup relay PCB			49	J710	SR710	registration sensor	
42	PCB3	J7006	pickup relay PCB			50	J714	SR714	paper displacement sensor	
43	PCB3	J7007	pickup relay PCB			51	J604	SW2	cassette detection switch	
52	PCB4	J302	memory controller PCB			56	J310	-	TAG floating connector	
53	PCB4	J303	memory controller PCB			57	J311	-	TAG floating connector	
54	PCB4	J304	memory controller PCB			58	J312	-	TAG floating connector	
55	PCB4	J305	memory controller PCB			59	J313	-	TAG floating connector	
60	PCB5	J6002	fixing relay PCB			62	J6005	SR6005	fixing delivery sensor	
61	PCB5	J6003	fixing relay PCB			61	-	TH1	fixing main thermistor	
61	PCB5	J6003	fixing relay PCB			61	-	TH2	fixing sub thermistor	
63	PCB8	J3003	low-voltage power PCB	J6007		68	J6009	H1	fixing heater	
64	PCB8	J3012	low-voltage power PCB	J5025		69	J8125	PCB18	main controller PCB	
65	PCB8	J3013	low-voltage power PCB	J5024		70	J8129	PCB18	main controller PCB	
66	PCB8	J3016	low-voltage power PCB	J5025		69	J8125	PCB18	main controller PCB	
67	PCB8	J3020	low-voltage power PCB			71	J3020	SW4	power switch	


22
23
32
14
27
15
28
20
16
29
19
30
18
31
17
24
26
25
21
1
12
11
8
4
3
5
7
9
2
13
33
10
6

F-15-19

T-15-11

No.	Notation	J No.	Electric parts name	Relay connector	No.	J No.	Notation	Electric parts name	Remarks
1	PCB2	J203	driver PCB		14	J5023	SW1	front cover detection switch	
1	PCB2	J203	driver PCB		14	J5023	SW3	delivery cover detection switch	
2	PCB2	J206	driver PCB	J5010	15	J5002	M5	ETB motor	
2	PCB2	J206	driver PCB	J5010	16	J5011	SL5011	ETB disengagement solenoid	
3	PCB2	J207	driver PCB		17	J5003	M6	M drum motor	
3	PCB2	J207	driver PCB		18	J5004	M7	C drum motor	
4	PCB2	J208	driver PCB		19	J5005	M8	Y drum motor	
4	PCB2	J208	driver PCB		20	J5006	M9	Bk drum motor	
5	PCB2	J209	driver PCB		21	J850	PCB9	reverse driver PCB	
6	PCB2	J210	driver PCB		6	-	SW2	cassette detection switch	
7	PCB2	J213	driver PCB		22	J5008	M1	fixing motor	
7	PCB2	J213	driver PCB		23	J705	SR705	fixing pressure release sensor	
8	PCB2	J402	driver PCB		24	J5007	M4	pickup motor	
8	PCB2	J402	driver PCB		25	J5012	SL5012	cassette pickup solenoid	
8	PCB2	J402	driver PCB		26	J5013	SL5013	manual pickup solenoid	
9	PCB2	J403	driver PCB		27	J403	SL5014	YMC developing disengagement solenoid	
10	PCB2	J404	driver PCB		28	J701	SR704	Bk drum HP sensor	
10	PCB2	J404	driver PCB		29	J702	SR703	Y drum HP sensor	
10	PCB2	J404	driver PCB		30	J703	SR702	C drum HP sensor	
10	PCB2	J404	driver PCB		31	J704	SR701	M drum HP sensor	
11	PCB2	J405	driver PCB		32	J405	SL5015	Bk developing disengagement solenoid	
12	PCB2	J406	driver PCB		21	J850	PCB9	reverse driver PCB	
13	PCB2	J410	driver PCB	J4010	33	J4010		paper feeder	


29
28
26
69
27
25
70
12
11
16
14
15
6
5
74
7
4
9
8
75
24
19
18
20
17
21
23
32
22
31
30
13
62
1
3
2
10
49
48
53
41
34, 37
45
56
46
39
38
40
47
54
33, 42
55
50
84
51
52
82
76
71
64
81
80
73
79

F-15-20

T-15-12

No.	Notation	J No.	Electric parts name	Relay connectro	No.	J No.	Notation	Electric parts name	Remarks
1	PCB9	J802	reverse driver PCB	J5016	4	J706	SR706	reverse sensor	
1	PCB9	J802	reverse driver PCB	J5016	5	J711	SR713	delivery paper full-level sensor	
1	PCB9	J802	reverse driver PCB	J5016	6	J712	SR715	delivery sensor	
2	PCB9	J805	reverse driver PCB		7	J5018	M11	reverse motor	
2	PCB9	J805	reverse driver PCB	J5017	8	J5019	SL5017	reverse solenoid	
3	PCB9	J850	reverse driver PCB		9	J820	M10	duplexing feed motor	
3	PCB9	J850	reverse driver PCB		10	J823	FM2	duplex fan	
11	PCB11	J8501	CCD PCB		13	J6151	PCB13	CCD relay PCB	
12	PCB11	J8502	CCD PCB		14	J9102	PCB12	inverter PCB	
15	PCB12	J9103	inverter PCB		15	-	LAMP1	document lamp	
16	PCB12	J9104	inverter PCB		16	-	LAMP2	document lamp	
17	PCB15	J101	control panel main PCB		22	J201A	PCB17	control panel relay PCB	
18	PCB15	J102	control panel main PCB		18	-	-	control panel LCD	
19	PCB15	J103	control panel main PCB		19	-	-	control panel LCD	
20	PCB15	J104	control panel main PCB		23	J204	PCB17	control panel relay PCB	
21	PCB15	J105	control panel main PCB		24	J201B	PCB16	control panel jog PCB	
25	PCB14	J6032	ADF relay PCB		25	-	M13	ADF pickup motor	
26	PCB14	J6033	ADF relay PCB		26	-	SL5016	ADF delivery solenoid	
27	PCB14	J6034	ADF relay PCB		28	J718	SR718	ADF paper sensor	
27	PCB14	J6034	ADF relay PCB		29	J719	SR719	ADF paper trailing edge sensor	
30	PCB17	J202	control panel relay PCB		33	J8114	PCB18	main controller PCB	
31	PCB17	J203	control panel relay PCB		31	J203	SP1	speaker	
32	PCB17	J205	control panel relay PCB		34	J8103	PCB18	main controller PCB	
37	PCB18	J8103	main controller PCB		32	J205	PCB17	control panel relay PCB	
38	PCB18	J8104	main controller PCB		59	J6013	-	USB	
39	PCB18	J8110	main controller PCB		60	J6014	-	SD-CARD	
40	PCB18	J8111	main controller PCB		61	J6015	-	LAN	
41	PCB18	J8113	main controller PCB		62	J6101	PCB13	CCD relay PCB	
42	PCB18	J8114	main controller PCB		30	J202	PCB17	control panel relay PCB	
45	PCB18	J8117	main controller PCB	J6021	65	J6035	-	CC-ŽO	
46	PCB18	J8118	main controller PCB		66	J6014	-	coin vendor	100/230V
46	PCB18	J8118	main controller PCB		67	J6022	PCB25	serial I/F PCB	120V
47	PCB18	J8119	main controller PCB	J6023	68	J6036	-	Card reader-E1	
48	PCB18	J8120	main controller PCB		69	J6028	PCB14	ADF relay PCB	
49	PCB18	J8121	main controller PCB		70	J5015	M12	reader motor	
50	PCB18	J8126	main controller PCB		71	J280	PCB26	pseudo CI PCB	100V
51	PCB18	J8127	main controller PCB		72	J1	PCB24	NCU PCB	
52	PCB18	J8128	main controller PCB		73	J2	PCB24	NCU PCB	
53	PCB18	J8131	main controller PCB	J5014	74	J715	SR717	reader HP sensor	
54	PCB18	J8133	main controller PCB		75	J720	SR720	front cover sensor	
55	PCB18	J8134	main controller PCB		76	J281	PCB26	pseudo CI PCB	100V
55	PCB18	J8134	main controller PCB		77	J281	PCB27	off hook PCB	120/230V
56	PCB18	J8140	main controller PCB		78	J6022	PCB25	serial I/F PCB	120V
84	PCB18	J8124	main controller PCB			-	-	secondary battery	
79	PCB19	J8151	modular PCB (120V)		80	J3	PCB24	NCU PCB	
79	PCB20	J8151	modular PCB (100V)		80	J3	PCB24	NCU PCB	
79	PCB21	J8151	modular PCB (230V)		80	J3	PCB24	NCU PCB	
81	PCB24	J4	NCU PCB		82	J282	PCB26	pseudo CI PCB	100V
81	PCB24	J4	NCU PCB		83	J232	PCB27	off hook PCB	120/230V

Chapter 16 Error Code

Contents

16.1 Error Code Table....16-1
16.1.1 Error Code Table....16-1
16.2 Error Code Details....16-2
16.2.1 Error Code Details....16-2
16.3 Jam Code....16-8
16.3.1 Jam Code (main body)....16-8
16.3.2 Jam Code (ADF)....16-8
16.4 Alarm Code....16-9
16.4.1 Alarm Code (ADF)....16-9
16.5 Fax Error Codes....16-9
16.5.1 Outline....16-9
16.5.1.1 Error Code Outline....16-9
16.5.2 User Error Code....16-9
16.5.2.1 User Error Code....16-9
16.5.3 Service Error Code....16-9
16.5.3.1 Service Error Code....16-9

16.1 Error Code Table

16.1.1 Error Code Table

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

An error code is shown in 7-digit [E000XXX] on the display on the operation panel. However, [000] in 2 to 4 digit is not used. Thus, an error code is described as [EXXX] using 5 to 7 digit in the service manual. (e.g.: E012 = E000012)

T-16-1

Error Code	Detail Code	Error Name/Explanation of Error
E000	0000	Fixing temperature abnormal rise
E001	0000	Fixing unit temperature rise detection (by main thermistor)
	0001	Fixing unit temperature rise detection (by sub thermistor)
E003	0000	Fixing unit temperature insufficient rise (by main thermistor)
	0001	Fixing unit temperature insufficient rise (by sub thermistor)
E004	0000	Error in fixing power supply drive circuit
E012	0000	ETB motor fails to run.
	0001	ETB motor runs but then stops running.
	0002	Drum Y motor fails to run.
	0003	Drum Y motor runs but then stops running.
	0004	Drum M motor fails to run.
	0005	Drum M motor runs but then stops running.
	0006	Drum C motor fails to run.
	0007	Drum C motor runs but then stops running.
	0008	Drum Bk motor fails to run.
	0009	Drum Bk motor runs but then stops running.
E014	0000	Fixing motor fails to run.
	0001	Fixing motor runs but then stops running.
E015	0000	Failure in developing disengagement
E020	0000	Error in density sensor
E024	0000	Y toner level sensor failure
	0001	M toner level sensor failure
	0002	C toner level sensor failure
	0003	Bk toner level sensor failure
E066	0000	Error in environment sensor
E078	0000	Error in primary transfer estrangement unit
E100	0000	Y scanner assembly fault
	0001	M scanner assembly fault
	0002	C scanner assembly fault
	0003	Bk scanner assembly fault
	0004	Primary pseudo BD fault
	0005	Secondary pseudo BD fault
E194	0000	Error in CPR sensor
E196	0001	Error in DCON ROM
E197	0000	Engine Communication Error
E198	0000	DC controller memory malfunction
E202	0000	Reader HP sensor fault
E225	0000	Error in light intensity of the lamp
E248	0000	EEPROM access error
E351	0000	Main controller PCB fault
E719	0000	Erroneous communication with card reader (serial communication)
	0002	Erroneous communication with coin vendor (serial communication)
E744	0001	Language file version error
	0002	Language file size error
	0003	Language file version error
	0004	Language file read error
E804	0000	Error in main unit fan
E805	0005	Error in duplex fan
E840	0000	Error in pressure release mechanism

16.2 Error Code Details

16.2.1 Error Code Details

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-16-2

Code		Description	Action
E000		Error in start-up of fixing assembly	
	0000	Description When 1 sec passed after energization of the heater, the detected temperature of the main thermistor is not 5 deg C or more (0 deg C at power on). Cause Disconnection of main thermistor, disconnection of fixing heater, error in DC controller PCB.	- Check of the connector of the low-voltage power supply PCB - Replacement of fixing sleeve unit - Replacement of DC controller PCB
E001		Error in overheating of fixing assembly	
	0000	Description The status where the detected temperature of the main thermistor is 225 deg C (approx. 0.84V equivalent) or more is detected for 0.5 continuous sec or more. Cause Error in main thermistor, error in DC controller PCB.	- Check of the connector of the low-voltage power supply PCB - Replacement of fixing sleeve unit - Replacement of DC controller PCB
	0001	Description The status where the detected temperature of the sub thermistor is 245 deg C (approx. 2.12V equivalent) or more is detected for 0.5 continuous sec or more. Cause Error in sub thermistor, error in DC controller PCB.	
E003		Error in abnormally low temperature of fixing assembly	
	0000	Description The status where the detected temperature of the main thermistor is 100 deg C (approx. 2.60V equivalent) or less is detected for 0.5 continuous sec or more. Cause Error in low-voltage power supply PCB, disconnection of main thermistor, error in DC controller PCB.	- Replacement of low-voltage power supply PCB - Replacement of fixing sleeve unit - Replacement of DC controller PCB
	0001	Description The status where the detected temperature of the sub thermistor is less than 100 deg C (approx. 0.38V equivalent) is detected 0.5 continuous sec or more after energization of the heater. Cause Error in sub thermistor, error in DC controller PCB.	- Check of the connector of the low-voltage power supply PCB - Replacement of fixing sleeve unit - Replacement of DC controller PCB
E004		Error in fixing power supply drive circuit	
	0000	Description Cannot detect the zero cross signal for the specified period or more. Cause Error in fixing control circuit block.	- Replacement of low-voltage power supply PCB

T-16-3

Code		Description	Action
E012		Error in activation of motor	
	0000	Description When 3.5 sec passed after activation of ETB motor, the cycle of ETB motor speed detection signal does not become its specified value. Cause Error in ETB motor, error in DC controller PCB.	- Replacement of ETB motor - Replacement of DC controller PCB
	0001	Description After ETB motor speed detection signal became the specified value of the cycle, it exceeds the specified cycle for 2 continuous sec or more. Cause Error in ETB motor, error in DC controller PCB.	
	0002	Description When 2.5 sec passed after activation of the yellow drum motor, the cycle of drum motor speed detection signal does not become its specified value. Cause Error in drum motor, error in DC controller PCB.	- Replacement of drum motor - Replacement of DC controller PCB
	0003	Description After the yellow drum motor speed detection signal became the specified value of the cycle, it exceeds the specified cycle for 2 continuous sec or more. Cause Error in drum motor, error in DC controller PCB.	
	0004	Description When 2.5 sec passed after activation of the magenta drum motor, the cycle of drum motor speed detection signal does not become its specified value. Cause Error in drum motor, error in DC controller PCB.	
	0005	Description After the magenta drum motor speed detection signal became the specified value of the cycle, it exceeds the specified cycle for 2 continuous sec or more. Cause Error in drum motor, error in DC controller PCB.	
	0006	Description When 2.5 sec passed after activation of the cyan drum motor, the cycle of the drum motor speed detection signal does not become its specified value. Cause Error in drum motor, error in DC controller PCB.	
	0007	Description After the cyan drum motor speed detection signal became the specified value of the cycle, it exceeds the specified cycle for 2 continuous sec or more. Cause Error in drum motor, error in DC controller PCB.	
	0008	Description When 2.5 sec passed after activation of the black drum motor, the cycle of the drum motor speed detection signal does not become its specified value. Cause Error in drum motor, error in DC controller PCB.	
	0009	Description After the black drum motor speed detection signal became the specified value of the cycle, it exceeds the specified cycle for 2 continuous sec or more. Cause Error in drum motor, error in DC controller PCB.	
E014		Error in activation of fixing motor	
	0000	Description When 2.5 sec passed after activation of fixing motor, the cycle of the fixing motor speed detection signal does not become its specified value. Cause Error in fixing motor, error in DC controller PCB.	- Replacement of fixing motor - Replacement of DC controller PCB
	0001	Description After the fixing motor speed detection signal became the specified value of the cycle, it exceeds the specified cycle for 2 continuous sec or more. Cause Error in fixing motor, error in DC controller PCB.	
E015		Failure in developing disengagement	
	0000	Description Developing cylinder disengagement mechanism does not function correctly. Cause Developing disengagement mechanism fault, developing disengagement solenoid fault, developing disengagement sensor fault, DC controller PCB fault.	Check the developing disengagement mechanism. Replace developing disengagement solenoid. Replace developing disengagement sensor. Replace DC controller PCB.
E020		Error in density sensor	

Code		Description	Action
	0000	Description Cannot receive enough light when detecting image density. Cause Dirt on density sensor, error in density sensor, error in DC controller PCB, error in toner cartridge.	- Replacement of ETB unit - Error in high-voltage joint (Check high-voltage joint for each color, and each joint to high-voltage PCB) - Replacement of DC controller - Replacement of toner cartridge

T-16-4

Code		Description	Action
E024		Toner level sensor failure	
	0000	Description Failure output from the toner level sensor (Yellow). Cause Memory controller PCB assembly fault, DC controller PCB assembly fault, toner cartridge fault.	- Replace toner cartridge - Replace memory controller PCB - Replace DC controller PCB
	0001	Description Failure output from the toner level sensor (Magenta). Cause Memory controller PCB assembly fault, DC controller PCB assembly fault, toner cartridge fault.	
	0002	Description Failure output from the toner level sensor (Cyan). Cause Memory controller PCB assembly fault, DC controller PCB assembly fault, toner cartridge fault.	
	0003	Description Failure output from the toner level sensor (Black). Cause Memory controller PCB assembly fault, DC controller PCB assembly fault, toner cartridge fault.	
E066		Error in environment sensor	
	0000	Description Failure in environment sensor. Cause Environment sensor fault, DC controller PCB assembly fault.	- Replace environment sensor - Replace DC controller PCB
E078		Error in primary transfer estrangement unit	
	0000	Description Primary transfer estrangement unit does not function properly. Cause Terminal assembly fault, transfer roller estrangement solenoid fault, EBT unit fault, high-voltage power PCB assembly fault.	- Replace ETB estrangement solenoid - Replace ETB unit - Terminal assembly fault (check on every contact between the terminals of each color and the high voltage PCB assembly)
E100		Error in scanner motor, laser unit, BD	
	0000	Description Yellow scanner assembly malfunction. Cause Laser scanner unit fault, DC controller PCB assembly fault.	- Replace laser scanner unit - Replace DC controller PCB
	0001	Description Magenta scanner assembly malfunction. Cause Laser scanner unit fault, DC controller PCB assembly fault.	
	0002	Description Cyan scanner assembly malfunction. Cause Laser scanner unit fault, DC controller PCB assembly fault.	
	0003	Description Black scanner assembly malfunction. Cause Laser scanner unit fault, DC controller PCB assembly fault.	
	0004	Description Failure output of a magenta BD signal Cause laser scanner unit fault, DC controller PCB fault.	
	0005	Description Failure output of a magenta BD signal Cause laser scanner unit fault, DC controller PCB fault.	
E194		Error in CPR sensor	
	0000	Description Cannot detect color displacement detection pattern, detected results fall outside the acceptable range. Cause Dirty color displacement detection sensor, color displacement detection sensor fault, DC controller PCB assembly fault, toner cartridge fault.	- Replace ETB unit - Terminal assembly fault (check on every contact between the terminals of each color and the high voltage PCB assembly) - Replace DC controller PCB - Replace toner cartridge
E196		Error in DCON ROM	
	0001	Updating the ROM on the DC controller PCB assembly has been failed.	- Replace DC controller PCB
E197		Engine communication error	
	0000	Internal communication error	- Replace DC controller PCB - Replace video controller PCB

Code		Description	Action
E198		DC controller memory malfunction	
	0000	Description DC controller memory malfunction. Cause DC controller PCB assembly fault.	- Replace DC controller PCB assembly

T-16-5

Code		Description	Action
E202		Reader HP sensor fault	
	0001	Reader HP outward fault The CCD unit moves backward, but does not move to the home position.	- Replace reader HP sensor. - Replace reader motor sensor. - Replace reader unit.
	0002	Reader HP homeward fault The CCD unit moves forward, but does not move to the home position.	
E225		Error in light intensity of the lamp	
	0000	Decrease of light intensity of the lamp.	Replace reader unit.
E248		EEPROM access error	
	0001	Error at EEPROM power-on EEPROM data cannot be read at power-on.	Replace reader unit.
	0002	Error in EEPROM writing EEPROM writing cannot be performed.	
	0003	Error in EEPROM reading after writing EEPROM reading cannot be performed after writing is performed.	
	0004	Error in EEPROM register writing EEPROM register writing cannot be performed.	
E351		Main controller PCB fault	
	0000	Description Internal error of the main controller PCB Cause Main controller PCB fault.	- Check the connection of main controller PCB. - Replace main controller PCB.
E719		Communication error of options	
	0000	Erroneous communication with card reader (serial communication) - Disconnection from the card reader has been detected since communication started after confirmation of normal connection to the card reader (after power-on). - A serial communication error has occurred. (The serial communication error cannot be recovered.)	- Check the connectors of the card reader and image processor PCB. - Replace the card reader for normal connection. - Replace the image processor PCB.
	0002	Erroneous communication with coin vendor (serial communication) - Disconnection from the coin vendor has been detected since communication started after confirmation of normal connection to the coin vendor (after power-on). - A serial communication error has occurred. (The serial communication error cannot be recovered.)	- Check the connection between the image processor PCB and serial PCB. - Check the connectors of the serial PCB and coin vendor for normal connection. - Replace the serial PCB. - Check the coin vendor. - Replace the image processor PCB.
E744		Language file/boot ROM/USB memory error	
	0001	Language file version error The language file version does not match Bootable.	Download a language file of the correct version.
	0002	Language file size error The language file is longer than the permitted size.	Download a language file of the correct version.
	0003	Language file version error The language file version does not match Bootable.	Download a language file of the correct version.
	0004	Language file read error Reading of language file is invalid.	Download a language file of the correct version.
E804		Error in power supply fan	
	0000	Description The fan lock detection signal is input for about 10 sec or longer continuously. Cause Power supply fault, DC controller PCB fault.	- Replace the power supply fan - Replace the DC controller PCB
E805		Error in duplexing fan/CPU fan	
	0005	Description The duplexing fan lock detection signal is input for about 10 sec or longer continuously. Cause Duplexing fan fault, DC controller PCB fault.	- Replace the duplexing fan - Replace the DC controller PCB
E840		Error in pressure release mechanism	
	0000	Description Although passing 2.5 sec from the start of HP control, HP (pressure condition) cannot be controlled. Cause Fixing drive assembly fault, fixing pressure release cam fault.	- Replace the fixing drive assembly - Replace the fixing pressure release cam

16.3 Jam Code

16.3.1 Jam Code (main body)

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-16-6

Code	Name	Sensor No.	Description
0104	Delay jam in paper pickup section	SR710	The registration sensor cannot detect the leading edge of paper from the moment paper pickup starts to the moment the jam detection time is reached.
0124	Reverse sensor 2 delay jam	SR715	The Reverse Sensor 2 cannot detect the leading edge of paper from the moment reverse starts to the moment the jam detection time is reached.
0208	Stationary jam in paper pickup section	SR710	The registration sensor cannot detect the no paper status specified time before the leading edge of the picked up paper reaches this sensor.
010c	Delay jam in deliver section	SR710, SR6005	- The fixing delivery sensor cannot detect presence of paper within the specified time after turning on of the registration clutch. - The fixing delivery sensor detected absence of paper within the specified time after the sensor had detected presence of paper within the specified time after turning on of the registration clutch. - The No.1 delivery sensor cannot detect presence of paper within the specified time after turning on of the fixing delivery sensor.
0210	Stationary jam in delivery section	SR710, SR6005	- The fixing delivery sensor cannot detect absence of paper within the specified time after turning off of the registration clutch. - The fixing delivery sensor cannot detect absence of paper within the specified time after the sensor detected the leading edge of paper. - The No.1 delivery sensor cannot detect absence of paper within the specified time after the sensor detected the leading edge of paper.
0214	Stationary jam in machine	SR706, SR710, SR6001, SR6005	Paper was detected in the paper transport path during initial rotation, during automatic delivery, at the end of cleaning, or at reception of an emergency stop command.
1118	Door open jam	SR720	The door was opened when there was printing paper in the transport path.
0221	Reverse section JAM	SR706, SR715	This jam is applied when the double-fed paper drops on the back of the host machine. The machine determines the reverse section jam if the paper length that is detected by the reverse sensor (SR706) is 50mm or more longer than the paper length that is detected by the delivery sensor (SR715).
0228	Reverse re-pickup section jam	SR710	The machine determines the reverse re-pickup jam if the registration sensor (SR710) cannot detect the presence of paper within the specified time (t) after the duplexing pickup starts. Specified time (t) differs depending on the feeding speed. 1/1 speed: approx. 2.0 sec 4/5 speed: approx. 2.5 sec 1/2 speed: approx 4.0 sec

16.3.2 Jam Code (ADF)

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-16-7

Code	Name	Sensor No.	Description
0001	ADF paper trailing edge sensor (SR719) not reaching (delay jam)	SR719	The leading edge of paper does not reach the ADF paper trailing edge sensor (SR719) within 1.8 sec after the trailing edge of precedent page passes through the ADF paper trailing edge sensor (SR719) in 1-sided multiple jobs. The leading edge of paper does not reach the ADF paper trailing edge sensor (SR719) within 1.2 sec after reverse operation starts in 2-sided job.
0002	ADF paper trailing edge sensor (SR719) stray (stray jam)	SR719	The trailing edge of paper does not passes through the ADF paper trailing edge sensor (SR719) within 3.4 sec after the leading edge of paper reaches the ADF paper trailing edge sensor (SR719) in 1-sided job. The trailing edge of paper does not passes through the ADF paper trailing edge sensor (SR719) within 3.5 sec after the leading edge of paper reaches the ADF paper trailing edge sensor (SR719) in 2-sided job.
0094	Initial stationary (in-body residual jam)	SR719	The ADF paper trailing edge sensor (SR719) detects paper at power-ON.
0095	Pickup NG	SR718	The paper is removed from the ADF original tray within 0.1 sec after the start key is pressed.

16.4 Alarm Code

16.4.1 Alarm Code (ADF)

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-16-8

Code	Name	Sensor No.	Description
0003H	Separation NG alarm	SR719	The leading edge of paper does not reach the ADF paper trailing edge sensor (SR719) within 3.2 sec after the ADF pickup motor starts positive rotation.

16.5 Fax Error Codes

16.5.1 Outline

16.5.1.1 Error Code Outline

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

An error code is used to indicate a fault in a machine, and is indicated in the machine's LCD or reports, showing the nature (symptoms) of the fault. Using the error code, the user or the service man can readily find out how to correct the fault by simply referring to the User's Manual or service manual.

An error code may be either of the following two types:

- **User Error Codes**
  A fault indicated as a user error code is one that can easily be corrected by the user, as by operating the machine. It takes the form of "#+number."
- **Service Error Codes**
  If a fault calls for a service man for correction, it is indicated as a service man error code in the form of "##+number" or "SYSTEM ERROR E+number."

MEMO:

- A service error code expressed in the form of "##+number" will not appear on the LCD, Error Tx Report, or Activity Report while the machine remains in factory default state. To check a service error code, shift bit 0 of service soft switch #1 SSSW SW01 to '1'.
- Display only the error codes which are newly incorporated in this machine as well as which require remedies unique to the product. For the causes and countermeasures of other error codes, refer to the separate G3/G4 Facsimile Error Code List (Rev. 2).

16.5.2 User Error Code

16.5.2.1 User Error Code

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-16-9

No.	Tx/Rx	Description
#0001	[Tx]	an original has jammed.
#0003	[Tx]	tine-out for copying or sending/receiving a single page has occurred.
#0005	[Tx]	time-out for initial identification (T0/T1) has occurred.
#0012	[Rx]	recording paper is absent at the other party.
#0018	[Tx]	auto call initiation has failed.
#0037	[Rx]	image memory overflow at time of reception has occurred.

16.5.3 Service Error Code

16.5.3.1 Service Error Code

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-16-10

No.	Tx/Rx	Description
##0100	[Tx]	at time of transmission, the procedural signal has been transmitted more than specified.
##0101	[Tx]	the modem speed does not match that of the other party.
##0102	[Tx]	at time of transmission, fall-back cannot be used.
##0104	[Tx]	at time of transmission, RTN or PIN is received.
##0106	[Rx]	at time of reception, the procedural signal is received for 6 sec while in wait for the signal.
##0107	[Rx]	at time of reception, the transmitting party cannot use fall-back.
##0109	[Tx]	at time of transmission, a signal other than DIS, DTC, FTT, CFR, or CRP is received, and the procedural signal has been sent more than specified.
##0114	[Rx]	at time of reception, RTN is transmitted.
##0200	[Rx]	at time of reception, no image carrier is detected for 5 sec.
##0201	[Tx]	DCN is received outside the normal parity procedure.
##0224	[Tx]	Error has occurred on transmission procedural signal.
##0228	[Rx]	Error has occurred on images' information control.
##0232	[Tx]	encoding error has occurred.
##0237	[Rx]	decoding error has occurred.
##0261	[Tx]	system error has occurred.

No.	Tx/Rx	Description
##0282	[Tx]	at time of transmission, the procedural signal has been transmitted more than specified.
##0283	[Tx]	at time of transmission, the procedural signal has been transmitted more than specified.
##0288	[Tx]	after transmission of EOP, a signal other than PIN, PIP, MCF, RTP, or RTN has been received.
##0289	[Tx]	after transmission of EOM, a signal other than PIN, PIP, MCF, RTP, or RTN has been received.
##0290	[Tx]	after transmission of MPS, a signal other than PIN, PIP, MCF, RTP, or RTN has been received.
##0670	[Tx]	at time of V.8 late start, the V.8 ability of DIS front the receiving party is expected to be detected, and the CI signal is expected to be transmitted in response; however, the procedure fails to advance, and the line is released because of T1 time-out.
##0671	[Rx]	at time of V.8 arrival, procedure fails to move to phase 2 after detection of CM signal from caller, causing T1 time-out and releasing line
##0672	[Tx]	at time of V.34 transmission, a shift in procedure from phase 2 to phase 3 and thereafter stops, causing the machine to release the line and suffer T1 timeout.
##0673	[Rx]	at time of V.34 reception, a shift in procedure from phase 2 to phase 3 and thereafter stops, causing the machine to release the line and suffer T1 timeout.
##0674	[Tx]	at time of V.34 transmission, a shift in procedure from phase 3 and phase 4 to the control channel and thereafter stops, causing the machine to release the line and suffer T1 timeout.
##0675	[Rx]	at time of V.34 reception, a shift in procedure from phase 3 and phase 4 to the control channel and thereafter stops, causing the machine to release the line and suffer T1 timeout.
##0752	[Tx]	at time of ECM transmission, DCN is received after transmission of PPS-NULL.
##0753	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-NULL, or T5 time-out (60 sec) has occurred.
##0754	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-NULL.
##0757	[Tx]	at time of ECM transmission, DCN is received after retransmission of PPS-MPS.
##0758	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-MPS, or T5 time-out (60 sec) has occurred.
##0759	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-MPS.
##0762	[Tx]	at time of ECM transmission, DCN is received after transmission of PPS-EOM.
##0763	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-MPS, or T5 time-out (60 sec) has occurred.
##0764	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-EOM.
##0767	[Tx]	at time of ECM transmission, DCN is received after transmission of PPS-EOP.
##0768	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-EOP, or T5 time-out (60 sec) has occurred.
##0769	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-EOP.
##0772	[Tx]	at time of ECM transmission, DCN is received after transmission of EOR-NULL.
##0773	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of EOR-NULL, or T5 time-out (60 sec) has occurred.
##0774	[Tx]	at time of ECM transmission, ERR is received after transmission of EOR-NULL.
##0778	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission EOR-MPS, or T5 time-out (60 sec) has occurred.
##0779	[Tx]	at time of ECM transmission, ERR is received after transmission of EOR-MPS.
##0782	[Tx]	at time of ECM transmission, DCN is received after transmission of EOR-EOM.
##0783	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of EOR-EOM, or T5 time-out (60 sec) has occurred.
##0784	[Tx]	at time of ECM transmission, ERR is received after transmission of EOR-EOM.
##0787	[Tx]	at time of ECM transmission, DCN is received after transmission of EOR-EOP.
##0788	[Tx]	at time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of EOR-EOP, or T5 time-out (60 sec) has occurred.
##0789	[Tx]	at time of ECM transmission, ERR is received after transmission of EOR-EOP.
##0790	[Rx]	at time of ECM reception, ERR is transmitted after transmission of EOR-Q.
##0791	[Tx]	while ECM mode procedure is under way, a signal other than a meaningful signal is received.
##0792	[Rx]	at time of ECM reception, PPS-NULL cannot be detected over partial page processing.
##0793	[Rx]	at time of ECM reception, no effective frame is received while high-speed signal reception is under way, thus causing time-out.
##0794	[Tx]	at time of ECM reception, PPR with all 0s is received.
##0795	[Tx]	a fault has occurred in code processing for communication.

Chapter 17 Special Management Mode

Contents

17.1 Overview 17-1
17.1.1 Preface 17-1
17.1.2 Entering the Special Management Mode 17-1
17.1.3 Menu List 17-2
17.2 Troubleshooting 17-3
17.2.1 Pre-Check 17-3
17.2.2 User Request 17-3
17.2.3 Paper Error 17-3
17.2.4 Image error 17-3

17.1 Overview

17.1.1 Preface

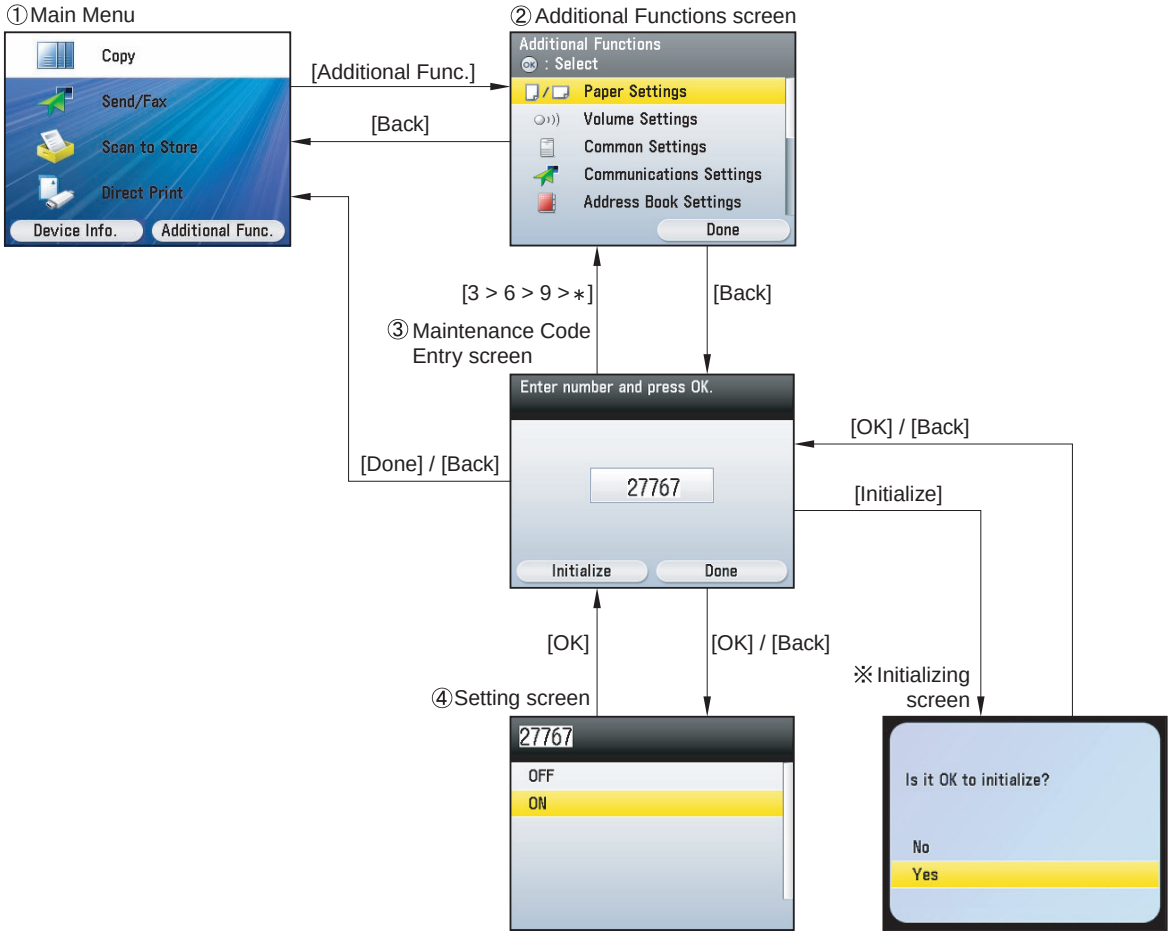
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Special management mode is the mode for users to solve a problem by themselves when an error occurs.
However, information about this mode is not disclosed to users.
Operators at call center ask users the occurrence situation and if they decide that users can solve this problem, they tell uses to use a measure with this mode to solve the problem by themselves.
If an issue cannot be solved with this mode, restore the setting to original.

17.1.2 Entering the Special Management Mode

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Turn ON the power of the host machine.
2) Press: Main Menu Key > Additional Func. key (Right Any key).
   Additional function screen is displayed.
3) Press: 3 > 6 > 9 > *.
   Mode transfers to the special management mode and maintenance code entry screen is displayed.
4) Enter the maintenance code (5 digit) and press OK.
   Setting screen is displayed.
5) Switch from OFF to ON and press OK.
   Pressing OK activates the setting.



F-17-1

If you restore the settings, switch from ON to OFF in the same procedure.
If you restore the initial settings, press Initialize key (left Any key) on the maintenance code entry screen.

⚠
- If the problem is not fixed after changing the setting, make sure to reset the setting.
- This machine receives jobs while changing the setting. In order not to receive jogs, disconnect the network cable before operation.

17.1.3 Menu List

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-17-1

Maintenance code	Special management function	Applicable mode	Setting value (*default)	Control details
27767	High-resisting paper mode	All modes	OFF * ON	Lower the final output value of transfer bias by 250V. (Only if the high-humidity transparency mode or high-humidity glossy film mode is not specified.)
27267	4mil transparency mode	Transparency	OFF * ON	Lower the final output value of transfer bias by 500V. (Only if the high-humidity transparency mode, high-humidity glossy paper mode or high-resisting paper mode is not specified.)
23866	Calcareous paper mode	All modes	OFF * ON	Apply the maximum attraction bias regardless of environment. Since there is no attraction paper resistor result, set the transfer bias in accordance with the environment.
25407	Thin/rough paper mode	Thin paper	OFF * ON	Change the process speed by 4/5 speed. Use the temperature control table for thin/rough paper (for thin paper only). Process speed is not changed but the temperature control table is changed (for plain or thick paper 2 only).
47267	High-humidity transparency mode	Transparency	OFF * ON	Lower the final output value of transfer bias by 100V (for transparency only).
47667	Re-transfer prevention mode	All modes	OFF * ON	Lower the transfer bias of yellow and black according to the environment. (Only if the high-humidity transparency mode, high-humidity glossy film mode, high-resisting paper mode or 4mil transparency mode is not specified.)
34691	Color displacement correction mode	Color mode	OFF * ON	Pre-rotation is extended by 10 sec and also paper interval is extended by one and half-round when printing.
14682	Foggy image prevention mode	All modes	OFF * ON	Pre-exposure is turned OFF. Transfer bias is not applied as a countermeasure against the trailing edge toner splash.
25200	Transparency permeability correction mode	Transparency	OFF * ON	Specify the control temperature at 180 deg C and make an idle rotation of the fixing assembly for 45 sec at initial rotation.
53649	Monochrome mode engage mode	Monochrome mode	OFF * ON	Print in ETB full-engaged mode.
35607	Hot offset prevention mode	All modes	OFF * ON	Lower the control temperature by 10 deg C without exception.
65676	Leading edge margin switch (enlarge)	All modes	OFF * ON	Enlarge the leading edge margin by 2 mm. When the leading edge margin is already set to small beforehand, the margin will be standard.
65677	Leading edge margin switch (reduce)	All modes	OFF * ON	Reduce the leading edge margin by 2 mm. When the leading edge margin is already set to large beforehand, the margin will be standard.
68676	Image position correction mode (toward right)	All modes	OFF * ON	Use this when the image is displaced to the left. When this is specified, image is moved to the right by 2 mm. When the image position correction mode (toward left) is already set, margin will be standard.
68677	Image position correction mode (toward left)	All modes	OFF * ON	Use this when the image is displaced to the right. When this is specified, image is moved to the left by 2 mm. When the image position correction mode (toward right) is already set, margin will be standard.
25607	Printing mode setting switch	For overseas models (plain paper mode)	OFF * ON	To prevent hot offset at outside Japan, change the printing mode of [plain paper] from [Normal mode] to [Light mode].

17.2 Troubleshooting

17.2.1 Pre-Check

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Firstly, check that the paper is used within the specifications (type, weight, size, direction, pickup position).
If it is not within the specifications, tell users the correct usage.

17.2.2 User Request

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-17-2

1	I need faster output in color/monochrome mixed mode.	Measure	Execute [Monochrome mode engage mode]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 53649 <Service mode> COPIER > FUNCTION > SPLMAN > SPL53649
		Note	When setting [Monochrome mode engage mode], it affects the life of color toner cartridges even though printing in monochrome.

17.2.3 Paper Error

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-17-3

1	Corner bend, dirt and paper stack in monochrome	Supplement	In [Pickup] page, if setting [Paper Type] to [Plain Paper] and printing monochrome, the corner of paper may bent, dirt may appear or paper may be stack depending on the paper type.
		Measure	Execute [Monochrome mode engage mode]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 53649 <Service mode> COPIER > FUNCTION > SPLMAN > SPL53649
		Note	When setting [Monochrome mode engage mode], it affects the life of color toner cartridges even though printing in monochrome.

17.2.4 Image error

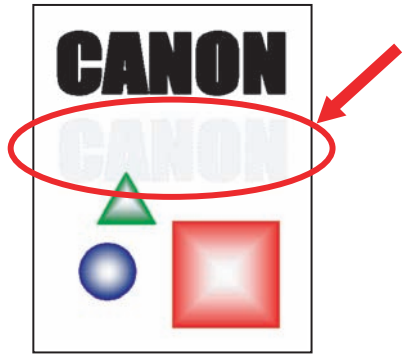
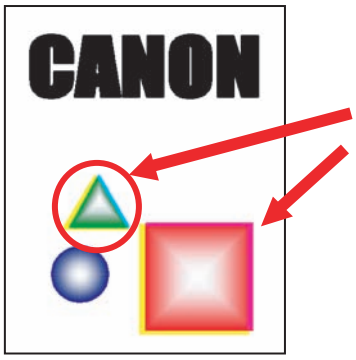
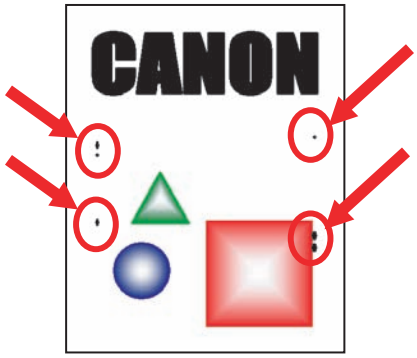
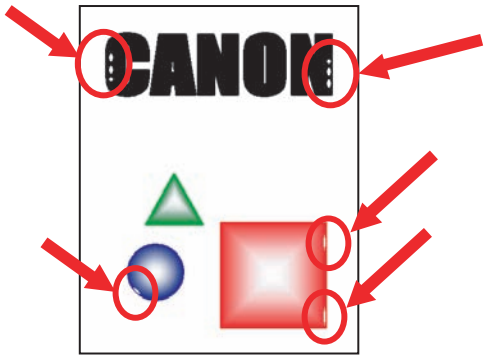
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

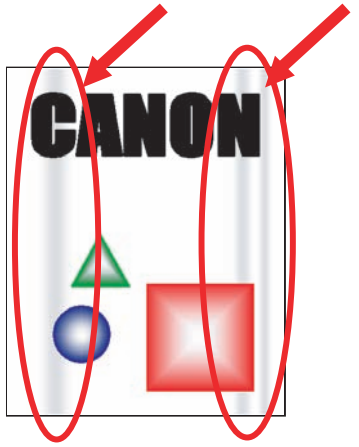
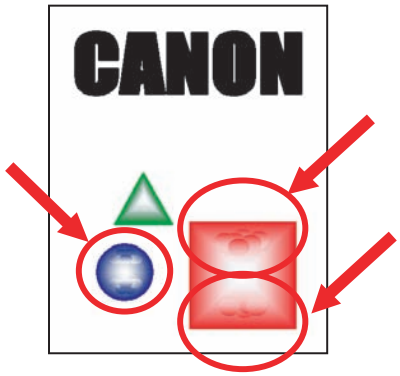
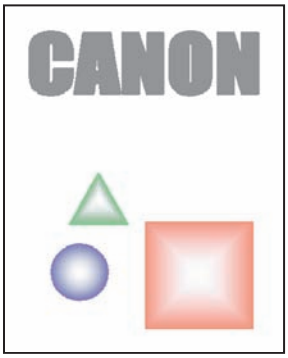
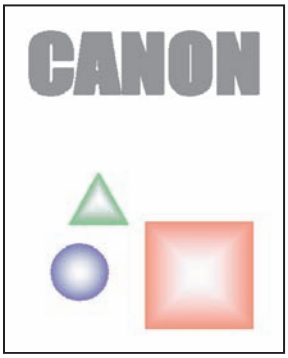
Flawless image

F-17-2

The following samples show the expected errors in A4 or letter size medias.

T-17-4

1	**Image ghost on the non-image area**		
		Measure	Execute [Hot offset prevention mode]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 35607 <Service mode> COPIER > FUNCTION > SPLMAN > SPL35607
		Note	If the toner fixing performance is deteriorated with the foregoing measure, do not use this setting.
2	**Color displacement**		
		Supplement	When printing the thick paper continuously, color displacement may occur.
		Measure	Execute [Color displacement correction mode]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 34691 <Service mode> COPIER > FUNCTION > SPLMAN > SPL34691
		Note	When [Color displacement correction mode] is set, printing speed may be slowing.
3	**Speckles on image and non-image area**		
		Supplement	When printing continuously, red color image may have blur or lines depending on the paper type.
		Measure	Execute [Calcareous paper mode]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 23866 <Service mode> COPIER > FUNCTION > SPLMAN > SPL23866
		Note	When [Calcareous paper mode] is set, paper jam may occur depending on the environment (especially, low-humidity environment).
4	**Toner is not fully fixed and printing is blur.**		
		Measure	Execute [Thin rough paper mode]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 25407 <Service mode> COPIER > FUNCTION > SPLMAN > SPL25407
		Note	None

5	**Fine lines in feeding direction**		
		Supplement	When printing images, vertical thin lines may appear on the image.
		Measure	Execute [Foggy image prevention mode]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 14682 <Service mode> COPIER > FUNCTION > SPLMAN > SPL14682
		Note	None
6	**Mottled image on gradation area (not smooth)**		
		Supplement	Depending on the paper type (especially thin paper) or environment (especially low-humidity environment), sparking mark may appear around characters or patterns.
		Measure	Execute [High resisting paper mode]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 27767 <Service mode> COPIER > FUNCTION > SPLMAN > SPL27767
		Note	When [High resisting paper mode] is set, printing quality may be deteriorated depending on the paper type (especially thick paper) or environment (high-humidity environment).
7	**Mottled image on entire image area (not smooth)**		
		Supplement	When printing the blue color image, mottled or scale-like image failure appears.
		Measure	Execute [Re-transfer prevention mode]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 47667 <Service mode> COPIER > FUNCTION > SPLMAN > SPL47667
		Note	When [Re-transfer prevention mode] is set, symptom may get worse depending on the printer status.
8	**Mottled image on entire image area in transparency (not smooth)**		
		Supplement	Depending on the environment (especially low-humidity environment), when printing on thin transparency film, uneven image failure may appear on the image.
		Measure	Execute [4mil transparency mode]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 27267 <Service mode> COPIER > FUNCTION > SPLMAN > SPL27267
		Note	None
9	**Mottled image at the center image area of the transparency (not smooth)**		
		Measure	Execute [High temperature transparency mode]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 47267 <Service mode> COPIER > FUNCTION > SPLMAN > SPL47267
		Note	None

10	**When projecting the transparency, image looks dark.**		
		Supplement	When using the transparency printed with this machine with a projector, image may look dark.
		Measure	Execute [Transparency permeability correction mode]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 25200 <Service mode> COPIER > FUNCTION > SPLMAN > SPL25200
		Note	When [Transparency permeability correction mode] is set, printing speed may be slowing or ghost image may appear on non-image area.
11	**Image position differs from the setting.**		
		Measure	When enlarging the leading edge margin, execute [leading edge margin switch (enlarge)]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 65676 <Service mode> COPIER > FUNCTION > SPLMAN > SPL65676
			When reducing the leading edge margin, execute [leading edge margin switch (reduce)]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 65677 <Service mode> COPIER > FUNCTION > SPLMAN > SPL65677
			When enlarging the left/right margin, execute [left/right margin switch (enlarge)]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 68676 <Service mode> COPIER > FUNCTION > SPLMAN > SPL68676
			When reducing the left/right margin, execute [left/right margin switch (reduce)]. <Special management mode> Main menu > Additional function > 3 > 6 > 9 > * > 68677 <Service mode> COPIER > FUNCTION > SPLMAN > SPL68677
		Note	None

Chapter 18 Service Mode

Contents

18.1 Outline....18-1
18.1.1 Service Mode Configuration....18-1
18.1.2 Service Mode Configuration....18-3
18.1.3 Exiting Service Mode....18-5
18.1.4 Exiting Service Mode....18-5
18.1.5 Service Mode Backup....18-5
18.1.6 Service Mode Backup....18-6
18.1.7 Service Mode Screen Operation....18-7
18.1.8 Service Mode Screen Operation....18-9
18.2 COPIER....18-11
18.2.1 DISPLAY....18-11
18.2.1.1 DISPLAY List....18-11
18.2.1.2 DISPLAY List....18-11
18.2.2 I/O....18-12
18.2.2.1 R-CON....18-12
18.2.2.2 R-CON....18-12
18.2.3 ADJUST....18-12
18.2.3.1 ADJUST List....18-12
18.2.3.2 ADJUST List....18-17
18.2.4 FUNCTION....18-21
18.2.4.1 FUNCTION List....18-21
18.2.4.2 FUNCTION List....18-26
18.2.4.3 Adjustment of the ACS identification level....18-32
18.2.4.4 Adjustment of the ACS identification level....18-33
18.2.5 OPTION....18-33
18.2.5.1 OPTION List....18-33
18.2.5.2 OPTION List....18-43
18.2.6 COUNTER....18-53
18.2.6.1 COUNTER List....18-53
18.2.6.2 COUNTER List....18-54
18.3 FEEDER....18-56
18.3.1 ADJUST....18-56
18.3.1.1 ADJUST List....18-56
18.3.1.2 ADJUST List....18-56
18.3.2 FUNCTION....18-56
18.3.2.1 FUNCTION List....18-56
18.3.2.2 FUNCTION List....18-56
18.4 FAX....18-57
18.4.1 SSSW....18-57
18.4.1.1 SSSW List....18-57
18.4.1.2 SSSW List....18-58
18.4.2 MENU....18-59
18.4.2.1 MENU List....18-59
18.4.2.2 MENU List....18-59
18.4.3 NUM....18-60
18.4.3.1 NUM List....18-60
18.4.3.2 NUM List....18-60
18.4.4 NCU....18-61
18.4.4.1 NCU List....18-61
18.5 TESTMODE....18-65
18.5.1 SYSTEM....18-65
18.5.1.1 SYSTEM List....18-65

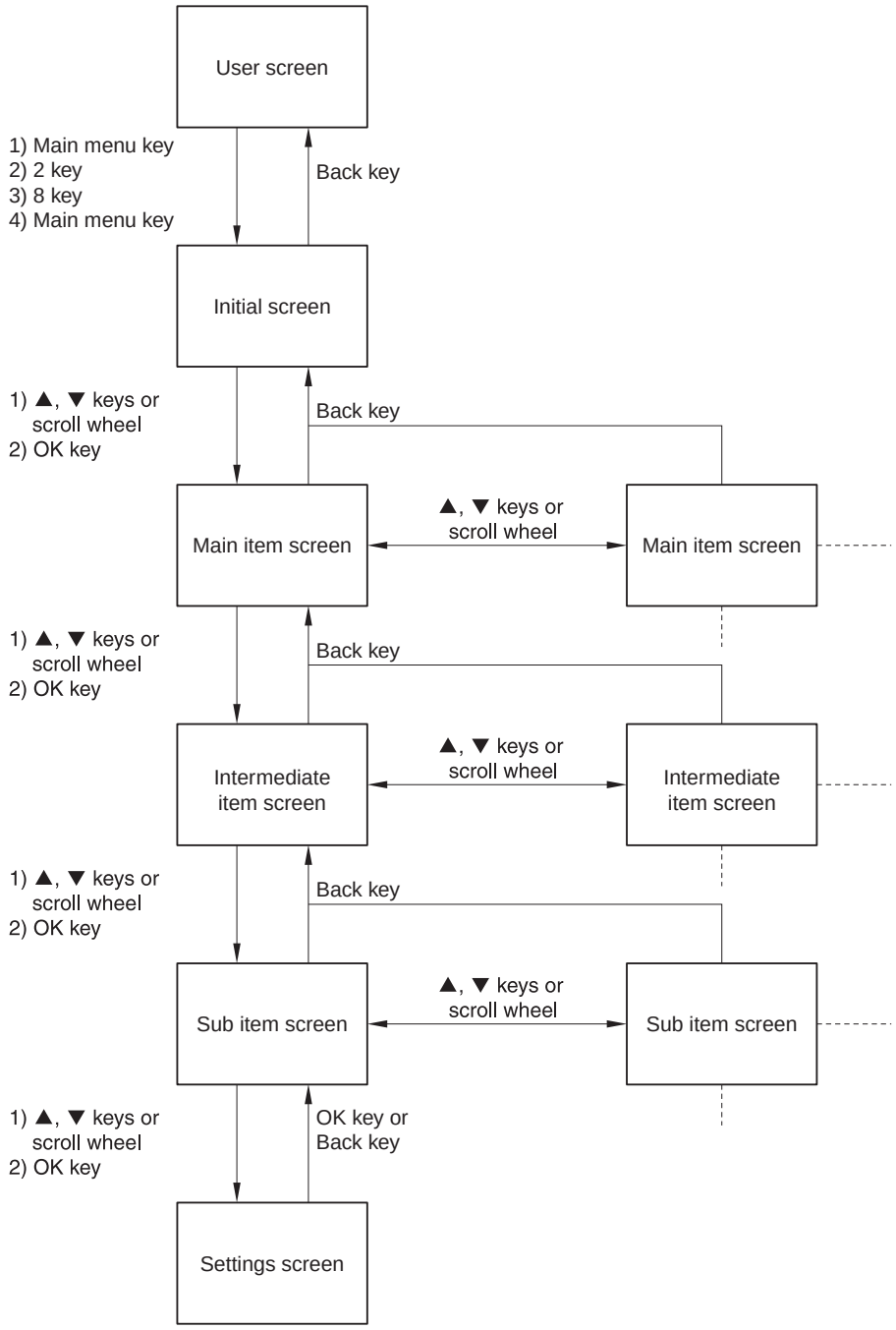
18.5.1.2 SYSTEM List 18-66
18.5.2 SCAN 18-67
18.5.2.1 SCAN List 18-67
18.5.2.2 SCAN List 18-67
18.5.3 PRINT 18-68
18.5.3.1 PRINT List 18-68
18.5.3.2 PRINT List 18-69
18.5.4 FAX 18-69
18.5.4.1 FAX List 18-69
18.5.4.2 FAX List 18-70
18.5.5 PANEL 18-71
18.5.5.1 PANEL List 18-71
18.5.5.2 PANEL List 18-73

18.1 Outline

18.1.1 Service Mode Configuration

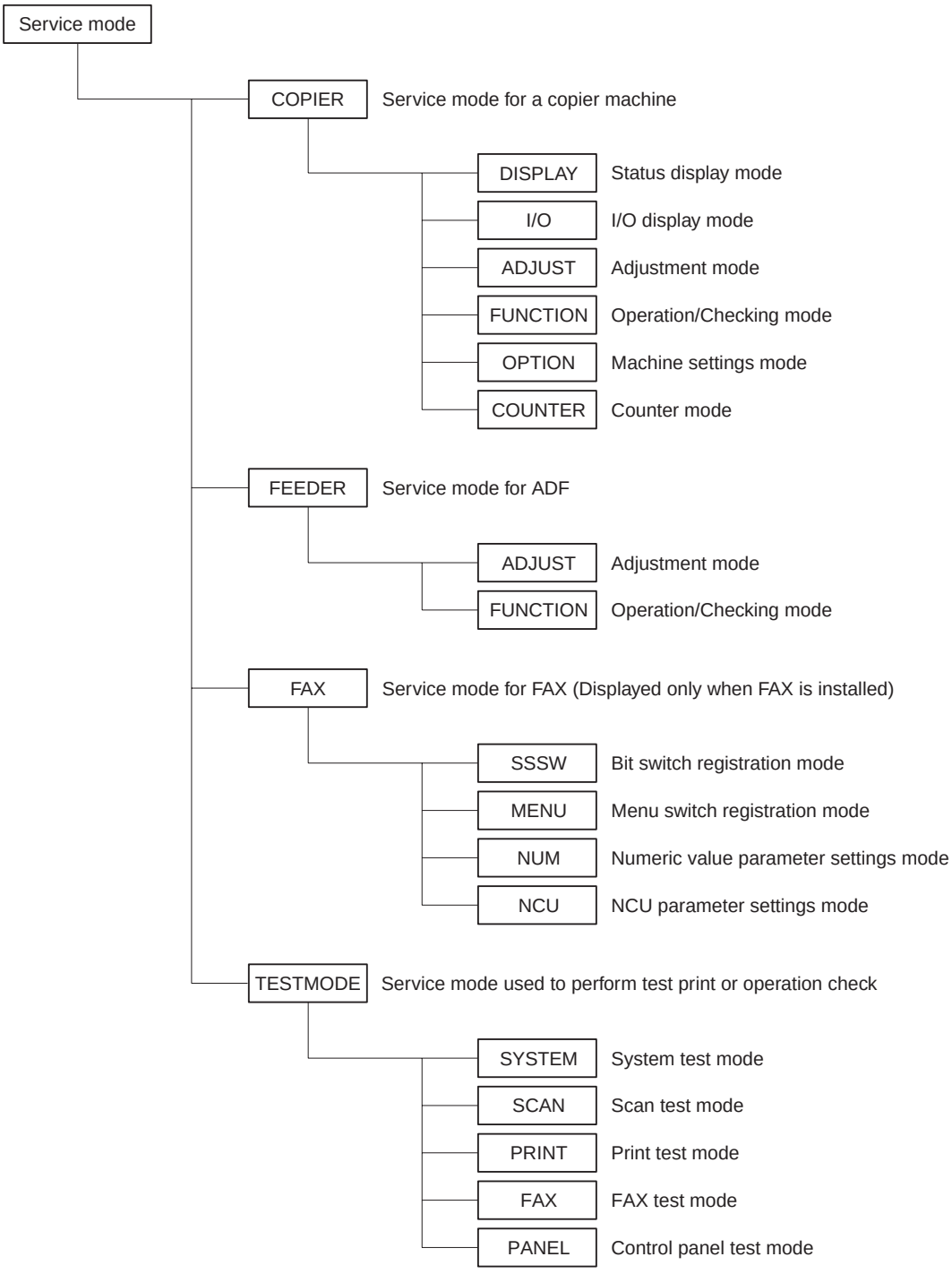
imageRUNNER C1022 / imageRUNNER C1022i

The service mode screen transition is shown below.



F-18-1

The machine's service mode is categorized in to the following modes.

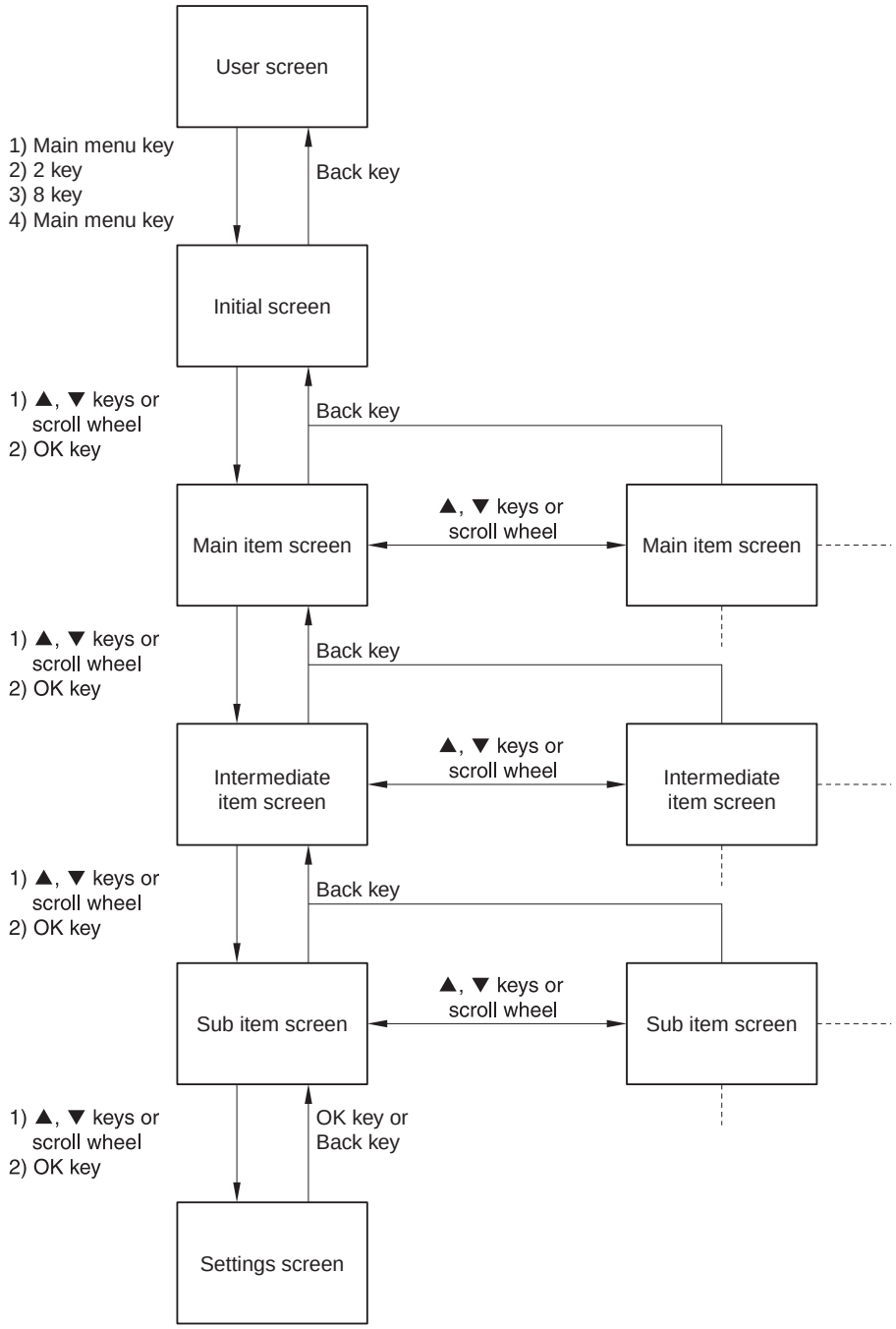


F-18-2

18.1.2 Service Mode Configuration

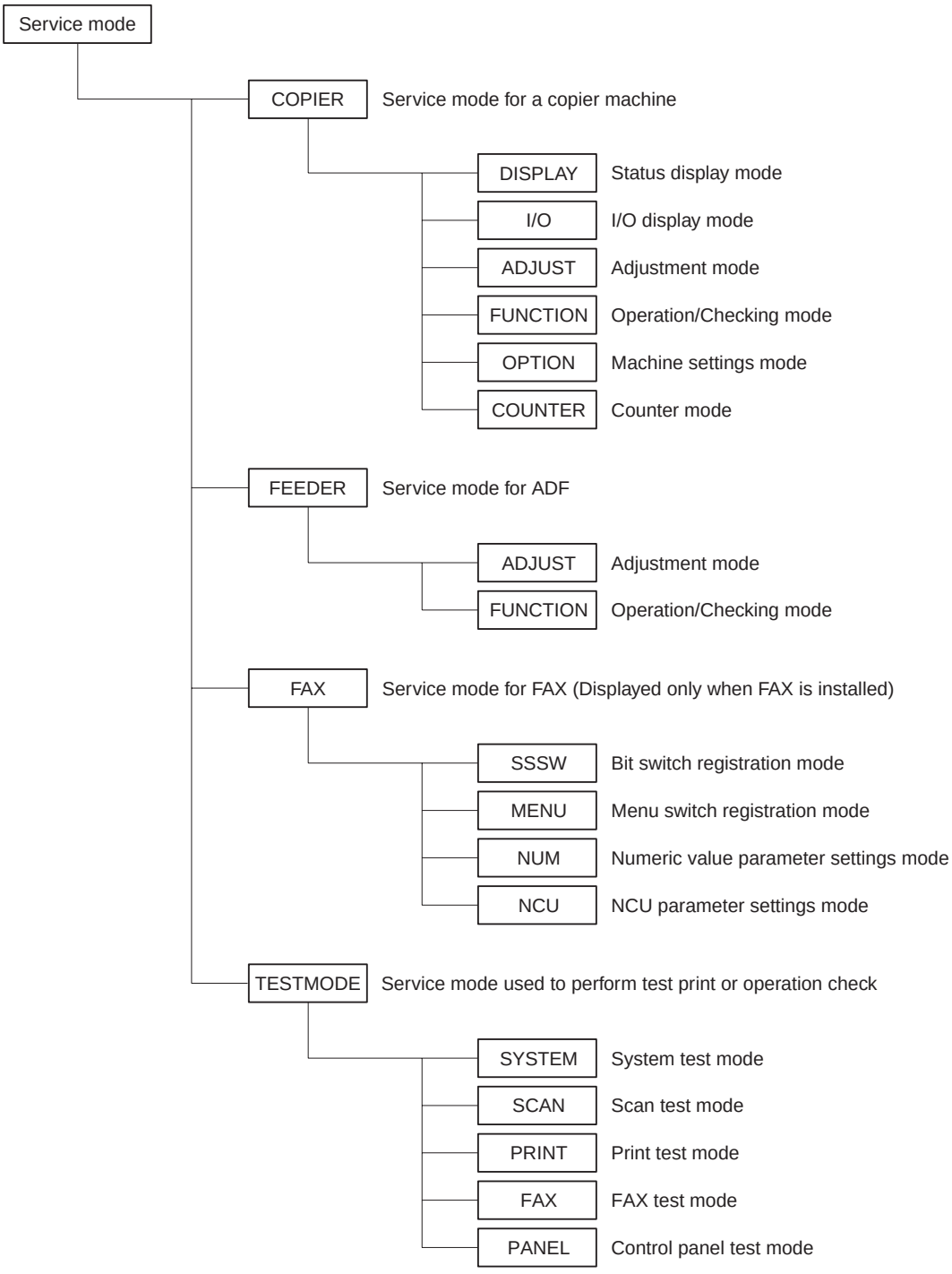
Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The service mode screen transition is shown below.



F-18-3

The machine's service mode is categorized in to the following modes.



F-18-4

18.1.3 Exiting Service Mode

imageRUNNER C1022 / imageRUNNER C1022i

Every time the Return key is pressed in a screen other than the initial screen, the screen goes back to the previous one.
When the Return key is pressed in the initial screen, the screen goes back to the main menu screen.

When using the service mode (ADJUST, FUNCTION, OPTION), be sure to turn the main power switch OFF/ON after exiting the service mode.

18.1.4 Exiting Service Mode

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Every time the Return key is pressed in a screen other than the initial screen, the screen goes back to the previous one.
When the Return key is pressed in the initial screen, the screen goes back to the main menu screen.

When using the service mode (ADJUST, FUNCTION, OPTION), be sure to turn the main power switch OFF/ON after exiting the service mode.

18.1.5 Service Mode Backup

imageRUNNER C1022 / imageRUNNER C1022i

Since there is no service label in the machine, printing in the service mode setting value is not available either.
Hence, adjustment in the market is being performed. Please note that when the value service mode is modified, be sure to record the modified value.

MEMO:
When PCB is replaced or RAM clearing is performed, the adjusted ADJUST and OPTION value will return to default value.

18.1.6 Service Mode Backup

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Since there is no service label in the machine, printing in the service mode setting value is not available either.
Hence, adjustment in the market is being performed. Please note that when the value service mode is modified, be sure to record the modified value.

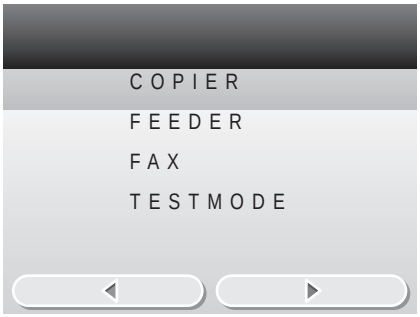
MEMO:
When PCB is replaced or RAM clearing is performed, the adjusted ADJUST and OPTION value will return to default value.

18.1.7 Service Mode Screen Operation

imageRUNNER C1022 / imageRUNNER C1022i

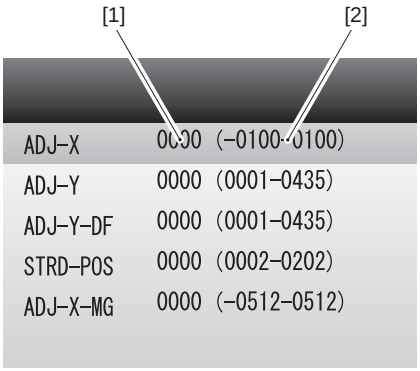
Initial/Main/Intermediate screen

To select the item:	▲/▼ key or scroll wheel
To display the items on the lower layer:	OK key
To display the items on the upper layer:	Back key



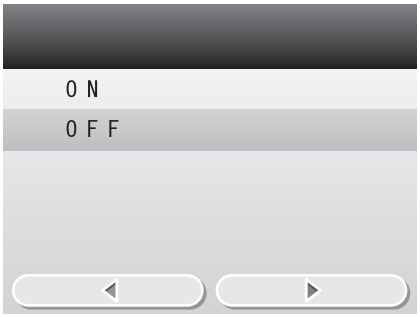
Sub screen 1

To select the item:	▲/▼ key or scroll wheel
To display the each setting screen:	OK key
To display the intermediate screen:	Back key
Setting value:	[1]
Setting range:	[2]



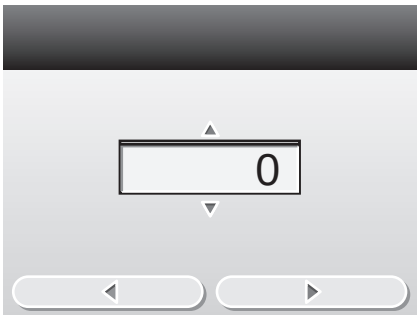
ON/OFF selection screen

To select the setting:	▲/▼ key or scroll wheel
To change the setting:	OK key
Not change the setting:	Back key



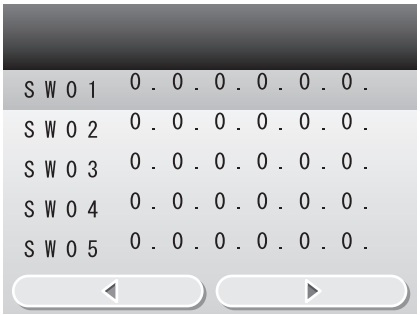
Numeric value entry screen 1

To enter the setting value:	Numeric keys
To increase the setting value by 1:	► key or scroll wheel (clockwise)
To decrease the setting value by 1:	◄ key or scroll wheel (counterclockwise)
To enter the negative setting value:	Right any key (if displayed), ◄ key or scroll wheel (counterclockwise) (continue to operate until the value smaller than 0 is displayed)
To change the setting:	OK key
Not change the setting:	Back key



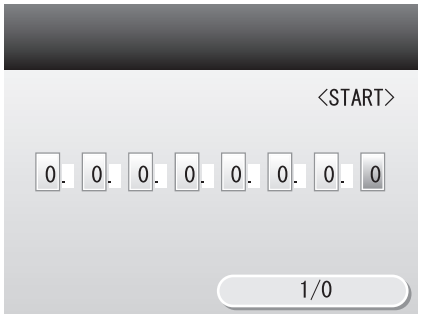
Switch selection screen

To select the switch:	▲/▼ key or scroll wheel
To display the entry screen of switch setting value:	OK key
To display the small screen:	Back key



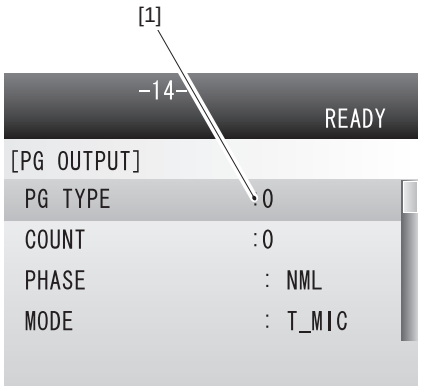
Entry screen of switch setting value

To select the setting item:	◄/► key
To switch the setting value:	Right any key (0 or 1 can be selected)
To change the setting:	OK key
Not change the setting:	Back key



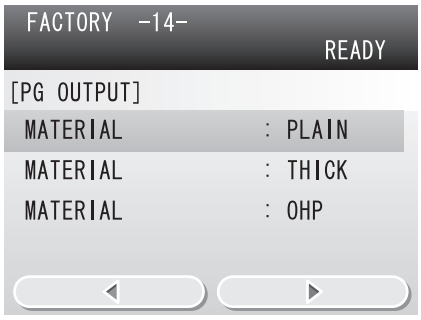
Small screen 2

To select the item:	▲/▼ key or scroll wheel
To display the each setting screen:	OK key
To display the previous screen:	Back key
Setting value:	[1]



Item selection screen

To select the setting:	▲/▼ key or scroll wheel
To change the setting:	OK key
Not change the setting:	Back key



Numeric value entry screen 2

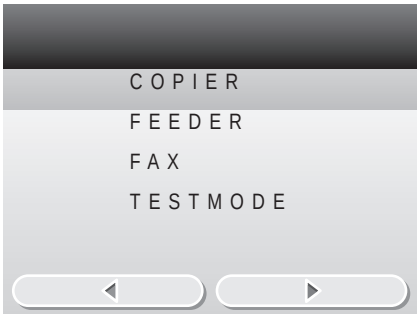
To enter the setting value:	Numeric keys
To change the setting:	OK key
Not change the setting:	Back key

18.1.8 Service Mode Screen Operation

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

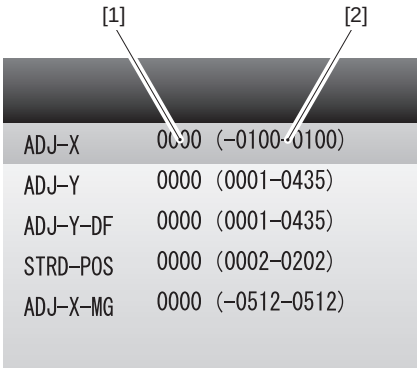
Initial/Main/Intermediate screen

To select the item:	▲/▼ key or scroll wheel
To display the items on the lower layer:	OK key
To display the items on the upper layer:	Back key



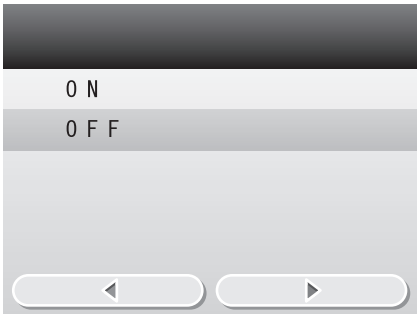
Sub screen 1

To select the item:	▲/▼ key or scroll wheel
To display the each setting screen:	OK key
To display the intermediate screen:	Back key
Setting value:	[1]
Setting range:	[2]



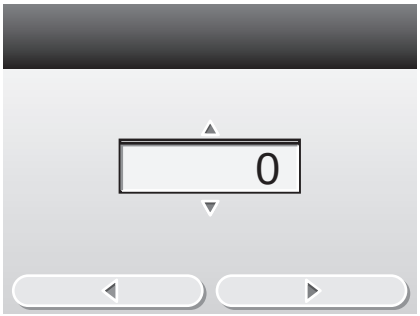
ON/OFF selection screen

To select the setting:	▲/▼ key or scroll wheel
To change the setting:	OK key
Not change the setting:	Back key



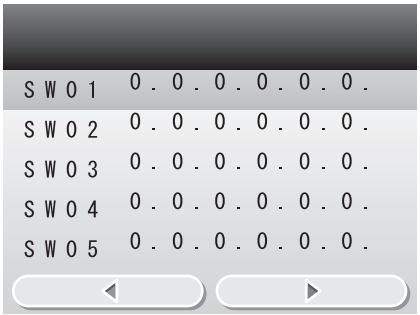
Numeric value entry screen 1

To enter the setting value:	Numeric keys
To increase the setting value by 1:	► key or scroll wheel (clockwise)
To decrease the setting value by 1:	◄ key or scroll wheel (counterclockwise)
To enter the negative setting value:	Right any key (if displayed), ◄ key or scroll wheel (counterclockwise) (continue to operate until the value smaller than 0 is displayed)
To change the setting:	OK key
Not change the setting:	Back key



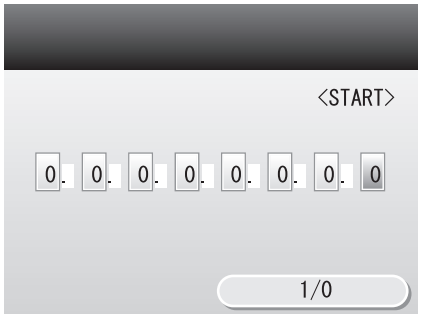
Switch selection screen

To select the switch:	▲/▼ key or scroll wheel
To display the entry screen of switch setting value:	OK key
To display the small screen:	Back key



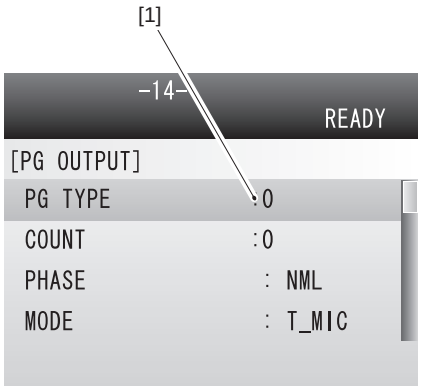
Entry screen of switch setting value

To select the setting item:	◄/► key
To switch the setting value:	Right any key (0 or 1 can be selected)
To change the setting:	OK key
Not change the setting:	Back key



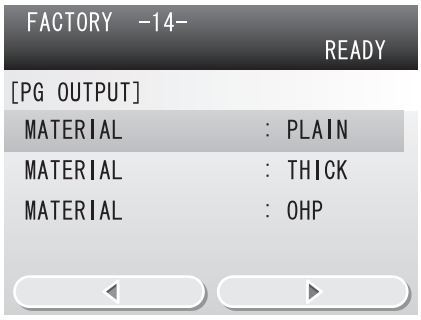
Small screen 2

To select the item:	▲/▼ key or scroll wheel
To display the each setting screen:	OK key
To display the previous screen:	Back key
Setting value:	[1]



Item selection screen

To select the setting:	▲/▼ key or scroll wheel
To change the setting:	OK key
Not change the setting:	Back key



Numeric value entry screen 2

To enter the setting value:	Numeric keys
To change the setting:	OK key
Not change the setting:	Back key

18.2 COPIER

18.2.1 DISPLAY

18.2.1.1 DISPLAY List

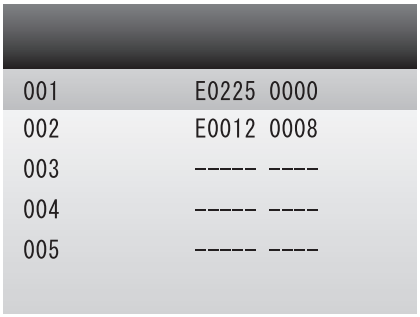
imageRUNNER C1022 / imageRUNNER C1022i

<VERSION>

T-18-1

COPIER > DISPLAY > VERSION	
Sub item	**Description**
MAIN	Display of the version/checksum/date of Bootable (product program area)
BOOT	Display of the version/checksum/date of BootROM (boot program area)
OPROM	Not used
ECONT	Display of the ROM version of the recording engine

<ERR>
Error code display screen
Display error codes and detailed codes for system errors.
128 errors maximum



F-18-5

<CCD>

T-18-2

COPIER > DISPLAY > CCD	
Sub item	**Description**
TARGET-B	BLUE color shading target value
TARGET-G	GREEN color shading target value
TARGET-R	RED color shading target value
GAIN-OB	CCD odd-bit BLUE color gain level adjustment value
GAIN-OG	CCD odd-bit GREEN color gain level adjustment value
GAIN-OR	CCD odd-bit RED color gain level adjustment value
GAIN-EB	CCD odd-bit BLUE color offset level adjustment value
GAIN-EG	CCD odd-bit GREEN color offset level adjustment value
GAIN-ER	CCD odd-bit RED color offset level adjustment value

18.2.1.2 DISPLAY List

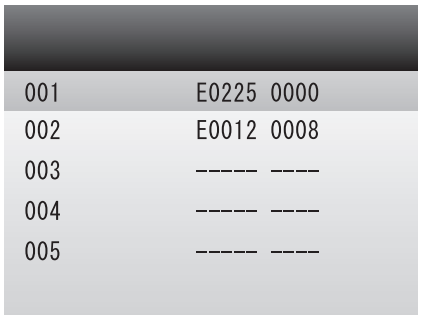
Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<VERSION>

T-18-3

COPIER > DISPLAY > VERSION	
Sub item	**Description**
MAIN	Display of the version/checksum/date of Bootable (product program area)
BOOT	Display of the version/checksum/date of BootROM (boot program area)
OPROM	Display of the version of the option ROM
ECONT	Display of the ROM version of the recording engine

<ERR>
Error code display screen
Display error codes and detailed codes for system errors.
128 errors maximum



F-18-6

<CCD>

T-18-4

COPIER > DISPLAY > CCD	
Sub item	**Description**
TARGET-B	BLUE color shading target value
TARGET-G	GREEN color shading target value
TARGET-R	RED color shading target value
GAIN-OB	CCD odd-bit BLUE color gain level adjustment value
GAIN-OG	CCD odd-bit GREEN color gain level adjustment value
GAIN-OR	CCD odd-bit RED color gain level adjustment value
GAIN-EB	CCD odd-bit BLUE color offset level adjustment value
GAIN-EG	CCD odd-bit GREEN color offset level adjustment value
GAIN-ER	CCD odd-bit RED color offset level adjustment value

<SPDTYPE>

T-18-5

COPIER > DISPLAY > SPDTYPE	
Sub item	**Description**
SPDTYPE	Display of the engine speed type of the Controller PCB

18.2.2 I/O

18.2.2.1 R-CON

imageRUNNER C1022 / imageRUNNER C1022i

T-18-6

Address	BIT	Description
P001	**-**	Not used
P002	**0**	Display of the sensor status (DES)
	1	Display of the sensor status (DS)
	2	Display of the sensor status (HPS)

18.2.2.2 R-CON

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-18-7

Address	BIT	Description
P001	**0**	Display of the sensor status (DES)
	1	Display of the sensor status (DS)
	2	Display of the sensor status (HPS)
P002	**-**	Not used

18.2.3 ADJUST

18.2.3.1 ADJUST List

imageRUNNER C1022 / imageRUNNER C1022i

<ADJ-XY>

T-18-8

COPIER > ADJUST > ADJ-XY	
Sub item	**Description**
ADJ-X	Adjustment of the optical image leading edge position (image reading start position in the sub-scanning direction) [When used] Incorrect copyboard reading position in the sub scanning direction. [Adjustment method] - When the no-image width is larger than the standard value, decrease the setting value. - When the area outside of the document field is printed, increase the setting value. - When the setting value is increased by 1, the image reading start position moves toward the trailing edge by 0.1mm. Setting range: -100 to 100 [Factory setting value: Differs depending on the machine.] [Value after RAM clearing: 0]
ADJ-Y	Adjustment of the CCD reading start cell position (image reading start position in the main-scanning direction) [When used] Incorrect copyboard reading position in the main scanning direction. [Adjustment method] - When the no-image width is larger than the standard value, decrease the setting value. - When the area outside of the document field is printed, increase the setting value. - When the setting value is increased by 1, the image reading start position moves toward the front side by 0.1mm. Setting range: 1 to 435 [Factory setting value: Differs depending on the machine.] [Value after RAM clearing: 169]
ADJ-Y-DF	Adjustment of the DF stream reading main-scanning position [When used] Incorrect DF stream reading position in the main scanning direction [Adjustment method] - When the setting value is increased by 1, the image reading start position moves toward the front side by 0.1mm. Setting range: 1 to 435 [Factory setting value: Differs depending on the machine.] [Value after RAM clearing: 338]
STRD-POS	Adjustment of the DF stream reading CCD reading position [When used] Incorrect DF stream reading position in the sub scanning direction. [Adjustment method] - When the setting value is increased by 1, the image reading start position moves toward the leading edge by 0.1mm. Setting range: -30 to 30 [Factory setting value: Differs depending on the machine. (It differs depending on whether the machine is a reader or an ADF.)] [Value after RAM clearing: 0]
ADJ-X-MG	Fine adjustment of the copyboard reading sub-scanning magnification [When used] The image printed in the copy output sheet is larger or smaller than the document image. [Adjustment method] Compare the document and copy output sheet, and make an adjustment. - When the image printed in the output sheet is smaller than the document image, increase the value. - When the image printed in the output sheet is larger than the document image, decrease the value. Setting range: -512 to 512 [Factory setting value/Value after RAM clearing: 0] [Caution: This adjustment is made to adjust the image position, and it may affect the SEND image.]

<CCD>

T-18-9

COPIER > ADJUST > CCD	
Sub item	**Description**
W-PLT-X	Entry of white level data for standard white plate Enter a correction value (X) for standard white plate on the backside of the copyboard glass using the service mode after replacement of the copyboard glass or after execution of RAM clearing for the reader unit. Setting range: 4096 to 9999 [Factory setting value/Value after RAM clearing: 8232]
W-PLT-Y	Entry of white level data for standard white plate Enter a correction value (Y) for standard white plate on the backside of the copyboard glass using the service mode after replacement of the copyboard glass or after execution of RAM clearing for the reader unit. Setting range: 4096 to 9999 [Factory setting value/Value after RAM clearing: 8693]
W-PLT-Z	Entry of white level data for standard white plate Enter a correction value (Z) for standard white plate on the backside of the copyboard glass using the service mode after replacement of the copyboard glass or after execution of RAM clearing for the reader unit. Setting range: 4096 to 9999 [Factory setting value/Value after RAM clearing: 9370]
DFTAR-R	Entry of the shading target value when DF is used (RED color) (Normal document reading position) Make the following adjustment using this item. [When used] An image failure occurred after execution of ADF white level adjustment (COPIER>FUNCTION>CCD>DF-WLVL1/DF-WLVL2) (caused by a dirt on the chart, etc.). Setting range: 0 to 99999 [Factory setting value: Differs depending on the machine] [Value after RAM clearing: 0]
DFTAR-G	Entry of the shading target value when DF is used (GREEN color) (Normal document reading position) Make the following adjustment using this item. [When used] An image failure occurred after execution of ADF white level adjustment (COPIER>FUNCTION>CCD>DF-WLVL1/DF-WLVL2) (caused by a dirt on the chart, etc.). Setting range: 0 to 99999 [Factory setting value: Differs depending on the machine] [Value after RAM clearing: 0]

COPIER > ADJUST > CCD	
Sub item	**Description**
DFTAR-B	Entry of the shading target value when DF is used (BLUE color) (Normal document reading position) Make the following adjustment using this item. [When used] An image failure occurred after execution of ADF white level adjustment (COPIER>FUNCTION>CCD>DF-WLVL1/DF-WLVL2) (caused by a dirt on the chart, etc.). Setting range: 0 to 99999 [Factory setting value: Differs depending on the machine] [Value after RAM clearing: 0]

<PASCAL>

T-18-10

COPIER > ADJUST > PASCAL	
Sub item	**Description**
OFST-P-Y	Adjustment of the test print reading density Perform an offset adjustment for the test print reading signal when PASCAL control is performed at the time of automatic gradation correction (full correction). Setting range: -32 to 32
OFST-P-M	Adjustment of the test print reading density Perform an offset adjustment for the test print reading signal when PASCAL control is performed at the time of automatic gradation correction (full correction). Setting range: -32 to 32
OFST-P-C	Adjustment of the test print reading density Perform an offset adjustment for the test print reading signal when PASCAL control is performed at the time of automatic gradation correction (full correction). Setting range: -32 to 32
OFST-P-K	Adjustment of the test print reading density Perform an offset adjustment for the test print reading signal when PASCAL control is performed at the time of automatic gradation correction (full correction). Setting range: -32 to 32

<MISC>

T-18-11

COPIER > ADJUST > MISC	
Sub item	**Description**
SEG-ADJ	Adjustment of the separation level of text and photo in the text/photo/map mode Setting range: -4 to 4 [Factory setting value/Value after RAM clearing: 0]
ACS-EN	Adjustment of copyboard ACS-EN ACS- judgment area [When used] The user does not need color adjustment of the upper edge or corners of the BOOK document. (At copyboard reading) Setting range: -2 to 2 Increase the setting value to enlarge the judgment area. [Factory setting value/Value after RAM clearing: 1]
ACS-EN2	Adjustment of DF ACS-EN ACS- judgment area [When used] The user does not need color adjustment of the upper edge or corners of the document. (At DF stream reading) Setting range: -2 to 2 Increase the setting value to enlarge the judgment area. [Factory setting value/Value after RAM clearing: 1]

<VIFADJ>

T-18-12

COPIER > ADJUST > VIFADJ	
Sub item	**Description**
CRG-BS-Y	Charging bias setting value (Y) [When used] Low/high image density or fogging occurs but the problem cannot be solved by changing the density setting and performing special printing process. [Adjustment method] - When fogging occurs, it may be eliminated by increasing the setting value. - Increase the setting value to slightly lower the image density. - Decrease the setting value to slightly increase the image density. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]
CRG-BS-M	Charging bias setting value (M) [When used] Low/high image density or fogging occurs but the problem cannot be solved by changing the density setting and performing special printing process. [Adjustment method] - When fogging occurs, it may be eliminated by increasing the setting value. - Increase the setting value to slightly lower the image density. - Decrease the setting value to slightly increase the image density. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]

COPIER > ADJUST > VIFADJ	
Sub item	**Description**
CRG-BS-C	Charging bias setting value (C) [When used] Low/high image density or fogging occurs but the problem cannot be solved by changing the density setting and performing special printing process. [Adjustment method] - When fogging occurs, it may be eliminated by increasing the setting value. - Increase the setting value to slightly lower the image density. - Decrease the setting value to slightly increase the image density. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]
CRG-BS-K	Charging bias setting value (Bk) [When used] Low/high image density or fogging occurs but the problem cannot be solved by changing the density setting and performing special printing process. [Adjustment method] - When fogging occurs, it may be eliminated by increasing the setting value. - Increase the setting value to slightly lower the image density. - Decrease the setting value to slightly increase the image density. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]
DEV-BS-Y	Developing bias setting value (Y) [When used] Low/high image density or fogging occurs but the problem cannot be eliminated by changing the density setting and performing special printing process. [Adjustment method] - Increase the setting value to increase the image density. - Decrease the setting value to decrease the image density. - When fogging occurs, it may be eliminated by decreasing the setting value. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]
DEV-BS-M	Developing bias setting value (M) [When used] Low/high image density or fogging occurs but the problem cannot be eliminated by changing the density setting and performing special printing process. [Adjustment method] - Increase the setting value to increase the image density. - Decrease the setting value to decrease the image density. - When fogging occurs, it may be eliminated by decreasing the setting value. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]
DEV-BS-C	Developing bias setting value (C) [When used] Low/high image density or fogging occurs but the problem cannot be eliminated by changing the density setting and performing special printing process. [Adjustment method] - Increase the setting value to increase the image density. - Decrease the setting value to decrease the image density. - When fogging occurs, it may be eliminated by decreasing the setting value. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]
DEV-BS-K	Developing bias setting value (Bk) [When used] Low/high image density or fogging occurs but the problem cannot be eliminated by changing the density setting and performing special printing process. [Adjustment method] - Increase the setting value to increase the image density. - Decrease the setting value to decrease the image density. - When fogging occurs, it may be eliminated by decreasing the setting value. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]
FRT-TS-Y	Transfer bias front side setting value (Y) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]
FRT-TS-M	Transfer bias front side setting value (M) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]

COPIER > ADJUST > VIFADJ	
Sub item	**Description**
FRT-TS-C	Transfer bias front side setting value (C) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]
FRT-TS-K	Transfer bias front side setting value (Bk) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]
BCK-TR-Y	Transfer bias backside setting value (Y) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]
BCK-TR-M	Transfer bias backside setting value (M) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]
BCK-TR-C	Transfer bias backside setting value (C) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]
BCK-TR-K	Transfer bias backside setting value (Bk) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]
PGR-YMCK	Setting value of transfer bias between sheets (Y, M, C, Bk) [When used] The density of the entire area of 70 to 80mm from the leading edge of the sheet is low/high, or there are an infinite number of white or black spots in an image when the entire print is halftone, etc. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for thin density in the area 70 to 80mm from the leading edge) - Decrease the setting value. (Effective for high density in the area 70 to 80mm from the leading edge) Setting range: -20 to 50 (Unit: 50V) [Factory setting value/Value after RAM clearing: 0]
FRT-ATH	Attraction bias front side setting value [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. Setting range: -20 to 20 (Unit: 100V) [Factory setting value/Value after RAM clearing: 0]

COPIER > ADJUST > VIFADJ	
Sub item	**Description**
BCK-ATH	Attraction bias backside setting value [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. Setting range: -20 to 20 (Unit: 100V) [Factory setting value/Value after RAM clearing: 0]
FRFS-TMP	Fixing temperature front side setting value [When used] The problem cannot be eliminated by performing special printing process and the image is not firmly fixed to the sheet, or a residual image remains in the image. [Caution] The fixing heater temperature is changed via this mode, and therefore, attentions should be paid when using this mode. [Adjustment method] - When an image is not firmly fixed to the sheet, the problem may be eliminated by increasing the setting value. - When a residual image remains in an image, the problem may be eliminated by decreasing the setting value. Setting range: -4 to 4 (Unit: Approx. 5 degree C) [Factory setting value/Value after RAM clearing: 0]
BKFS-TMP	Fixing temperature backside setting value [When used] The problem cannot be eliminated by performing special printing process and the image is not firmly fixed to the sheet, or a residual image remains in the image. [Caution] The fixing heater temperature is changed via this mode, and therefore, attentions should be paid when using this mode. [Adjustment method] - When an image is not firmly fixed to the sheet, the problem may be eliminated by increasing the setting value. - When a residual image remains in an image, the problem may be eliminated by decreasing the setting value. Setting range: -4 to 4 (Unit: Approx. 5 degree C) [Factory setting value/Value after RAM clearing: 0]

18.2.3.2 ADJUST List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<ADJ-XY>

T-18-13

COPIER > ADJUST > ADJ-XY	
Sub item	**Description**
ADJ-X	Adjustment of the optical image leading edge position (image reading start position in the sub-scanning direction) [When used] Incorrect copyboard reading position in the sub scanning direction. [Adjustment method] - When the no-image width is larger than the standard value, decrease the setting value. - When the area outside of the document field is printed, increase the setting value. - When the setting value is increased by 1, the image reading start position moves toward the trailing edge by 0.1mm. Setting range: -100 to 100 [Factory setting value: Differs depending on the machine.] [Value after RAM clearing: 0]
ADJ-Y	Adjustment of the CCD reading start cell position (image reading start position in the main-scanning direction) [When used] Incorrect copyboard reading position in the main scanning direction. [Adjustment method] - When the no-image width is larger than the standard value, decrease the setting value. - When the area outside of the document field is printed, increase the setting value. - When the setting value is increased by 1, the image reading start position moves toward the front side by 0.1mm. Setting range: 1 to 100 [Factory setting value: Differs depending on the machine.] [Value after RAM clearing: 23]
ADJ-Y-DF	Adjustment of the DF stream reading main-scanning position [When used] Incorrect DF stream reading position in the main scanning direction [Adjustment method] - When the setting value is increased by 1, the image reading start position moves toward the front side by 0.1mm. Setting range: 1 to 100 [Factory setting value: Differs depending on the machine.] [Value after RAM clearing: 53]
STRD-POS	Adjustment of the DF stream reading CCD reading position [When used] Incorrect DF stream reading position in the sub scanning direction. [Adjustment method] - When the setting value is increased by 1, the image reading start position moves toward the leading edge by 0.1mm. Setting range: -30 to 30 [Factory setting value: Differs depending on the machine. (It differs depending on whether the machine is a reader or an ADF.)] [Value after RAM clearing: 2]
ADJ-X-MG	Fine adjustment of the copyboard reading sub-scanning magnification [When used] The image printed in the copy output sheet is larger or smaller than the document image. [Adjustment method] Compare the document and copy output sheet, and make an adjustment. - When the image printed in the output sheet is smaller than the document image, increase the value. - When the image printed in the output sheet is larger than the document image, decrease the value. Setting range: -512 to 512 [Factory setting value/Value after RAM clearing: 0] [Caution: This adjustment is made to adjust the image position, and it may affect the SEND image.]

<CCD>

T-18-14

COPIER > ADJUST > CCD	
Sub item	**Description**
W-PLT-X	Entry of white level data for standard white plate Enter a correction value (X) for standard white plate on the backside of the copyboard glass using the service mode after replacement of the copyboard glass or after execution of RAM clearing for the reader unit. Setting range: 4096 to 9999 [Factory setting value/Value after RAM clearing: 8180]
W-PLT-Y	Entry of white level data for standard white plate Enter a correction value (Y) for standard white plate on the backside of the copyboard glass using the service mode after replacement of the copyboard glass or after execution of RAM clearing for the reader unit. Setting range: 4096 to 9999 [Factory setting value/Value after RAM clearing: 8635]
W-PLT-Z	Entry of white level data for standard white plate Enter a correction value (Z) for standard white plate on the backside of the copyboard glass using the service mode after replacement of the copyboard glass or after execution of RAM clearing for the reader unit. Setting range: 4096 to 9999 [Factory setting value/Value after RAM clearing: 9291]
DFTAR-R	Entry of the shading target value when DF is used (RED color) (Normal document reading position) Make the following adjustment using this item. [When used] An image failure occurred after execution of ADF white level adjustment (COPIER>FUNCTION>CCD>DF-WLVL1/DF-WLVL2) (caused by a dirt on the chart, etc.). Setting range: 65537 to 99999 [Factory setting value: Differs depending on the machine] [Value after RAM clearing: 77690]
DFTAR-G	Entry of the shading target value when DF is used (GREEN color) (Normal document reading position) Make the following adjustment using this item. [When used] An image failure occurred after execution of ADF white level adjustment (COPIER>FUNCTION>CCD>DF-WLVL1/DF-WLVL2) (caused by a dirt on the chart, etc.). Setting range: 65537 to 99999 [Factory setting value: Differs depending on the machine] [Value after RAM clearing: 79766]
DFTAR-B	Entry of the shading target value when DF is used (BLUE color) (Normal document reading position) Make the following adjustment using this item. [When used] An image failure occurred after execution of ADF white level adjustment (COPIER>FUNCTION>CCD>DF-WLVL1/DF-WLVL2) (caused by a dirt on the chart, etc.). Setting range: 65537 to 99999 [Factory setting value: Differs depending on the machine] [Value after RAM clearing: 82867]

<PASCAL>

T-18-15

COPIER > ADJUST > PASCAL	
Sub item	**Description**
OFST-P-Y	Adjustment of the test print reading density Perform an offset adjustment for the test print reading signal when PASCAL control is performed at the time of automatic gradation correction (full correction). Setting range: -32 to 32
OFST-P-M	Adjustment of the test print reading density Perform an offset adjustment for the test print reading signal when PASCAL control is performed at the time of automatic gradation correction (full correction). Setting range: -32 to 32
OFST-P-C	Adjustment of the test print reading density Perform an offset adjustment for the test print reading signal when PASCAL control is performed at the time of automatic gradation correction (full correction). Setting range: -32 to 32
OFST-P-K	Adjustment of the test print reading density Perform an offset adjustment for the test print reading signal when PASCAL control is performed at the time of automatic gradation correction (full correction). Setting range: -32 to 32

<MISC>

T-18-16

COPIER > ADJUST > MISC	
Sub item	**Description**
SEG-ADJ	Adjustment of the separation level of text and photo in the text/photo/map mode Setting range: -4 to 4 [Factory setting value/Value after RAM clearing: 0]
ACS-EN	Adjustment of copyboard ACS-EN ACS- judgment area [When used] The user does not need color adjustment of the upper edge or corners of the BOOK document. (At copyboard reading) Setting range: -2 to 2 Increase the setting value to enlarge the judgment area. [Factory setting value/Value after RAM clearing: 1]

COPIER > ADJUST > MISC	
Sub item	**Description**
ACS-EN2	Adjustment of DF ACS-EN ACS- judgment area [When used] The user does not need color adjustment of the upper edge or corners of the document. (At DF stream reading) Setting range: -2 to 2 Increase the setting value to enlarge the judgment area. [Factory setting value/Value after RAM clearing: 1]

<VIFADJ>

T-18-17

COPIER > ADJUST > VIFADJ	
Sub item	**Description**
CRG-BS-Y	Charging bias setting value (Y) [When used] Low/high image density or fogging occurs but the problem cannot be solved by changing the density setting and performing special printing process. [Adjustment method] - When fogging occurs, it may be eliminated by increasing the setting value. - Increase the setting value to slightly lower the image density. - Decrease the setting value to slightly increase the image density. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]
CRG-BS-M	Charging bias setting value (M) [When used] Low/high image density or fogging occurs but the problem cannot be solved by changing the density setting and performing special printing process. [Adjustment method] - When fogging occurs, it may be eliminated by increasing the setting value. - Increase the setting value to slightly lower the image density. - Decrease the setting value to slightly increase the image density. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]
CRG-BS-C	Charging bias setting value (C) [When used] Low/high image density or fogging occurs but the problem cannot be solved by changing the density setting and performing special printing process. [Adjustment method] - When fogging occurs, it may be eliminated by increasing the setting value. - Increase the setting value to slightly lower the image density. - Decrease the setting value to slightly increase the image density. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]
CRG-BS-K	Charging bias setting value (Bk) [When used] Low/high image density or fogging occurs but the problem cannot be solved by changing the density setting and performing special printing process. [Adjustment method] - When fogging occurs, it may be eliminated by increasing the setting value. - Increase the setting value to slightly lower the image density. - Decrease the setting value to slightly increase the image density. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]
DEV-BS-Y	Developing bias setting value (Y) [When used] Low/high image density or fogging occurs but the problem cannot be eliminated by changing the density setting and performing special printing process. [Adjustment method] - Increase the setting value to increase the image density. - Decrease the setting value to decrease the image density. - When fogging occurs, it may be eliminated by decreasing the setting value. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]
DEV-BS-M	Developing bias setting value (M) [When used] Low/high image density or fogging occurs but the problem cannot be eliminated by changing the density setting and performing special printing process. [Adjustment method] - Increase the setting value to increase the image density. - Decrease the setting value to decrease the image density. - When fogging occurs, it may be eliminated by decreasing the setting value. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]
DEV-BS-C	Developing bias setting value (C) [When used] Low/high image density or fogging occurs but the problem cannot be eliminated by changing the density setting and performing special printing process. [Adjustment method] - Increase the setting value to increase the image density. - Decrease the setting value to decrease the image density. - When fogging occurs, it may be eliminated by decreasing the setting value. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]

COPIER > ADJUST > VIFADJ	
Sub item	**Description**
DEV-BS-K	Developing bias setting value (Bk) [When used] Low/high image density or fogging occurs but the problem cannot be eliminated by changing the density setting and performing special printing process. [Adjustment method] - Increase the setting value to increase the image density. - Decrease the setting value to decrease the image density. - When fogging occurs, it may be eliminated by decreasing the setting value. Setting range: -10 to 10 (Unit: 20V) [Factory setting value/Value after RAM clearing: 0]
FRT-TS-Y	Transfer bias front side setting value (Y) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]
FRT-TS-M	Transfer bias front side setting value (M) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]
FRT-TS-C	Transfer bias front side setting value (C) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]
FRT-TS-K	Transfer bias front side setting value (Bk) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]
BCK-TR-Y	Transfer bias backside setting value (Y) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]
BCK-TR-M	Transfer bias backside setting value (M) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]
BCK-TR-C	Transfer bias backside setting value (C) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]

COPIER > ADJUST > VIFADJ	
Sub item	**Description**
BCK-TR-K	Transfer bias backside setting value (Bk) [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for toner scatter/dotted image) - Decrease the setting value. (Effective for white dots/white flower patches/image with high granularity in halftone mode) Setting range: -30 to 40 (Unit: 50V) - It is preferable to enter values in the condition of "M <= C <= Y <= K". [Factory setting value/Value after RAM clearing: 0]
PGR-YMCK	Setting value of transfer bias between sheets (Y, M, C, Bk) [When used] The density of the entire area of 70 to 80mm from the leading edge of the sheet is low/high, or there are an infinite number of white or black spots in an image when the entire print is halftone, etc. [Adjustment method] - The problem may be eliminated by changing the setting value. - Increase the setting value. (Effective for thin density in the area 70 to 80mm from the leading edge) - Decrease the setting value. (Effective for high density in the area 70 to 80mm from the leading edge) Setting range: -20 to 50 (Unit: 50V) [Factory setting value/Value after RAM clearing: 0]
FRT-ATH	Attraction bias front side setting value [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. Setting range: -20 to 20 (Unit: 100V) [Factory setting value/Value after RAM clearing: 0]
BCK-ATH	Attraction bias backside setting value [When used] An image failure occurs depending on the type or condition of the paper AND the problem cannot be eliminated by performing special printing process. [Adjustment method] - The problem may be eliminated by changing the setting value. Setting range: -20 to 20 (Unit: 100V) [Factory setting value/Value after RAM clearing: 0]
FRFS-TMP	Fixing temperature front side setting value [When used] The problem cannot be eliminated by performing special printing process and the image is not firmly fixed to the sheet, or a residual image remains in the image. [Caution] The fixing heater temperature is changed via this mode, and therefore, attentions should be paid when using this mode. [Adjustment method] - When an image is not firmly fixed to the sheet, the problem may be eliminated by increasing the setting value. - When a residual image remains in an image, the problem may be eliminated by decreasing the setting value. Setting range: -4 to 4 (Unit: Approx. 5 degree C) [Factory setting value/Value after RAM clearing: 0]
BKFS-TMP	Fixing temperature backside setting value [When used] The problem cannot be eliminated by performing special printing process and the image is not firmly fixed to the sheet, or a residual image remains in the image. [Caution] The fixing heater temperature is changed via this mode, and therefore, attentions should be paid when using this mode. [Adjustment method] - When an image is not firmly fixed to the sheet, the problem may be eliminated by increasing the setting value. - When a residual image remains in an image, the problem may be eliminated by decreasing the setting value. Setting range: -4 to 4 (Unit: Approx. 5 degree C) [Factory setting value/Value after RAM clearing: 0]

18.2.4 FUNCTION

18.2.4.1 FUNCTION List

imageRUNNER C1022 / imageRUNNER C1022i

<INSTALL>

T-18-18

COPIER > FUNCTION > INSTALL	
Sub item	**Description**
CARD	Not used
E-RDS	Enabling/disabling of the e-RDS function Setting value: 0: Disabled, 1: Enabled [Factory setting value/Value after RAM clearing: 0]
RGW-PORT	Setting of the port number of the sales company's server used for E-RDS Refer to the port number in the user mode. Setting range: 1 to 65535 [Factory setting value/Value after RAM clearing: 443]
COM-TEST	Confirmation of the connection with the sales company's server used for E-RDS Try to connect the sales company's server. Make a judgment of whether connection has been made or not, and display the result by OK or NG.

COPIER > FUNCTION > INSTALL	
Sub item	**Description**
COM-LOG	Display of a communication error log Display the detailed result of communication test with the sales company's server used for E-RDS. When an error occurs in communication with the sales company's server, error information is displayed. <Log contents> Number: No. 1 is assigned to the latest one. Error code: 8-digit hexadecimal number Date: Date when the error occurred Time: Time when the error occurred Detailed error information: 128 characters maximum 5 logs maximum
RGW-ADR	Setting of the URL of the sales company's server used for E-RDS Set the URL of the sales company's server. Setting value: URL (incl. NULL, SJIS is not supported) (128 characters maximum)
CNT-DATE	Setting of the date and time to start sending counter information to the server Set the date and time to start sending counter information to the server using the E-RDS third-party extended function. Refer to the date and time setting in the user mode. (12 digits: YYYYMMDDHHMM) YYYY: Year, MM: Month, DD: Day, HH: Hour, MM: Minute) Setting range: 2000/1/1 00:00 to 2037/12/31 23.59 [Factory setting value/Value after RAM clearing: 000000000000]
CNT-INTV	Setting of the interval for sending counter information to the server Set the interval of sending counter information to the server using the E-RDS third-party extended function. Setting range: 1 to 168 (Unit: 1 week) [Factory setting value/Value after RAM clearing: 24]
STRD-POS	Automatic detection of the DF stream reading CCD reading position Execute this item after performing any of the replacement of the ADF unit, replacement of the reader unit, or RAM clearing for the scanner. [Operation] Â@The reading position is adjusted while the scanner continues to move by 0.1 mm. [Time] Â@When the lamp lights up: Adjustment time: 10 sec When the lamp does not light up: Lamp adjustment time of 10 to 30 sec + Adjustment time of 10 sec [Displays] 0: Operating / 1: OK / 2: NG

<ATTRACT>
Not used
<DPC>
Not used
<CST>
Not used
<CLEANING>
Not used
<FIXING>
Not used
<PANEL>

T-18-19

COPIER > FUNCTION > PANEL	
Sub item	**Description**
LCD-CHK	Not used
LED-CHK	Not used
LED-OFF	Not used
KEY-CHK	Not used

<PART-CHK>
Not used
<CLEAR>

T-18-20

COPIER > FUNCTION > CLEAR	
Sub item	**Description**
R-CON	Not used
TEL-USER	Clearing of user data and data registered in the address book SSSW is not cleared.
SRVC-DAT	Clearing of SERVICE DATA User data is not cleared.
COUNTER	Clearing of the maintenance/parts counter and mode counter to 0 Clear the counter (numerator) on the system dump list to 0.

COPIER > FUNCTION > CLEAR		
Sub item		**Description**
TYPE		Initialization of USER DATA and SERVICE DATA for the specified destination setting Japan: JAPAN USA: U.S.A. Europe: EUROPE 1(area) / U.K. / SWEDEN / SWISS / AUSTRIA / DENMARK / NORWAY / HOLLAND / BERUGIUM / FINLAND / ITALY / SPAIN / PORTUGAL / IRELAND / HUNGARY / SAF / GERMANY / FRANCE / CZECH / SLOVENIA / PORLAND / GREECE/ LUXEMBOURG / RUSSIA / EUROPE 2(area) Australia: AUSTRALIA / N.Z. China: CHINA Korea: KOREA Taiwan: TAIWAN Asia: SINGAPORE / HONG KONG / MALAYSIA / ASIA(area) Note) STANDARD / CANADA are not in use.
HIST	**ACT-HIST**	Clearing of the communication management history
	ACC-HIST	Clearing of the print history
	JAM-HIST	Clearing of the jam history
	ERR-HIST	Clearing of the error (E code) history
	ALARM	Not used
	ENV-HIST	Not used
CARD		Clearing of the connection information of a new card reader equipment Clear data related to card IDs (department). Operation method 1) Set the department management in user registration to OFF. 2) Execute this item. 3) Execute COPIER>FUNCTION>CLEAR>ERR>E719. 4) Turn off the main power switch. 5) Remove the control card equipment. 6) Turn on the main power switch.
ERR	**E355-CLR**	Not used
	E719-CLR	Clearing of E719 Clear the connection information of the control card equipment and coin robo.
PWD-CLR		Clearing of the password of a system administrator
FILE-SYS		Initialization of the file system for the main and optional ROMs (File decompression)
FORMAT	**FMT-USB**	Not used
	FMT-LDRV	Not used
	FMT-SD	Not used
	512	Not used
	1024	Not used
	2048	Not used
CA-KEY		Initialization of the CA certificate installed (Only displayed after the activation of e-RDS function)
ERDS-DAT		Initialization of e-RDS parameters (Only displayed after the activation of e-RDS function) - ERDS SWITCH - RGW-ADDRESS - RGW-PORT - CNT-DATE - CNT-INTV - COM-LOG
DEPT-USR		Setting the ID management by department and user management to OFF
SYS-INFO		Clearing of the system administration password
ALL		Clearing of the following items - USER DATA - SERVICE DATA - JOB ID - Histories - Clearing date MEMO: USER DATA/SERVICE DATA are initialized for the default destination setting.
EAM-DAT		Not used
ELA-DAT		Not used

<MISC-R>

T-18-21

COPIER > FUNCTION > MISC-R	
Sub item	**Description**
SCANLAMP	Turning on the scanning lamp

<MISC-P>

T-18-22

COPIER > FUNCTION > MISC-P	
Sub item	**Description**
MISC-SW	Not used
MISC-NUM	Not used

COPIER > FUNCTION > MISC-P		
Sub item		**Description**
OUTPUT	**SRVC-DAT**	Output of the system data list/system dump list
	SYS-DAT	Output of the system data list Mainly output the report of each service software switch and parameter used for FAX function.
	SYS-DMP	Output of the system dump list Output the service data such as the number of communication, number of received sheets, number of sent sheets, number of recording sheets, and number of errors, etc.
	CNTR	Output of the counter report Display the counter indicating how often the function of reading, recording, communication, and copy operation is performed.
	ERR-LOG	Output of error logs
	SPEC	Output of the spec report Print the current equipment condition.
	ERDS-COM	Output of e-RDS communication error logs
	SRVC-LBL	Not used

<SENS-ADJ>
Not used
<SYSTEM>

T-18-23

COPIER > FUNCTION > SYSTEM	
Sub item	**Description**
DOWNLOAD	Switching to the download mode

<HV-TR>
Not used
<CCD>

T-18-24

COPIER > FUNCTION > CCD	
Sub item	**Description**
DF-WLVL1	Not used
DF-WLVL2	Not used

<PARAM>

T-18-25

COPIER > FUNCTION > PARAM	
Sub item	**Description**
SYS-SW	Registration of system parameters (See the table shown below.)

T-18-26

PARAM > SYS-SW			
SW	**Bit**	**Function**	**Remarks**
05	7	Switching of whether or not to prohibit exporting of PWD in the address book (0: Do not prohibit exporting, 1: Prohibit exporting)	Initial value: 1

T-18-27

COPIER > FUNCTION > PARAM		
Sub item		**Description**
SYS-NUM		001 to 100
FAX-SW		Not used
FAX-NUM		Not used
NET-SW		SW01 to SW50
NETNUM		001 to 050
NET-CERT	**VERSION**	CA certificate version
	SRLNUM	Serial number
	SIGALG	Signature algorithm
	ISSUER	Issuer
	VLD_FROM	Commencement date of the expiration period
	VLD_TO	Finishing date of the expiration period
	SUBJECT	Subject of issuance
	PUB_KEY	Public key algorithm and size
	THMB_PRT	Digest (Thumb imprint)
CDC-SW		Not used
CDC-NUM		Not used
EXC-NAVI		Switch for whether or not to start up the installation navigation When setting this switch to 1 after the installation navigation is completed, the installation navigation does not start up at the time of next activation. Setting value: 0: Start up the navigation. 1: Do not start up the navigation. [Factory setting value/Value after RAM clearing: 0]

COPIER > FUNCTION > PARAM	
Sub item	**Description**
DSP-PPRSE	Setting of whether or not to display the paper setting screen when ACS setting is set to ON at the time of copy operation Setting value: 0: Do not display the screen. 1: Display the screen. [Factory setting value/Value after RAM clearing: 0]
SET-PPRSZ	Setting of the ACS document size when DSP-PPRSEL is set to ON When the document size is unknown, a screen prompting an operator to enter the document size is displayed. When the sizes other than UNKNOWN are specified, ACS judgment processing is performed based on the specified document size. Setting range: 0 to 20 Setting value: 0: UNKNOWN, 2: A4, 3: A5, 7: B5, 12: LGL, 13: LTR, 60: STMT [Factory setting value/Value after RAM clearing: 0]
DSP-TNROW	Setting of whether or not to display "Toner Low" Setting value: 0: Do not display the screen. 1: Display the screen. [Factory setting value/Value after RAM clearing: 1 (0 for iR C1022/iR C1022i (for US) only)]
SCAN-SW	Not used
SCAN-NUM	Not used
APS-LTLG	Switching of whether or not to display "Automatic (LTR/LGL)" Setting value: 0: Do not display the item, 1: Display the item [Factory setting value/Value after RAM clearing: 0: MF9330C/ MF9340C/ MF9370C/ iR C1021/ iR C1021i/ iR C1022/ iR C1022i/ iR C2110F/ iR C2110N 1: Other models]
DSP-SCWD	Switching of whether or not to enable [Scan to Store] > [Store on Memory Media] Setting value: 0: Enable the function, 1: Disable the function [Factory setting value/Value after RAM clearing: 0]
DSP-MDPR	Switching of whether or not to enable [Direct Print] Setting value: 0: Enable the function, 1: Disable the function [Factory setting value/Value after RAM clearing: 0]
DSP-ACS	Switching of whether or not to display [ACS Function Adjustment] when selecting [Additional Func.] > [Adjustment/Cleaning] > [ACS Function Adjustment]. Setting value: 0: Do not display the item, 1: Display the item [Factory setting value/Value after RAM clearing: 0: IR C1022i / IR C1021I / iRC 1021i / IRC 1022 / iRC 1021 for North America, Europe, and Australia 1: Other models]

<PRINTER>

T-18-28

COPIER > FUNCTION > PRINTER	
Sub item	**Description**
SYS-SW	Not used
SYS-NUM	Not used

<VIFFNC>

T-18-29

COPIER > FUNCTION > VIFFNC	
Sub item	**Description**
RSTR-DCN	Restoration of the backup information of DC controller NVRAM retained in the controller's NVRAM to the DC controller NVRAM Perform the following procedure after replacement of the DC controller PCB. 1) Using this item, restore the backup data of the DC controller retained in the NVRAM of the main controller PCB to the NVRAM of the DC controller PCB. 2) Print the user data list by selecting "Initial setting/registration > Report output > List print > User data list". 3) Execute full correction by selecting "Initial setting/registration > Adjustment > Cleaning > Automatic gradation correction > Full correction".
CLR-DCN	Clear of the backup information of DC controller NVRAM retained in the controller's NVRAM to the DC controller NVRAM
SEL-TALC	Setting of TALC paper ETB cleaning is performed 10 times at initial rotation.
INV-ATVC	Setting to enable ATVC Ignore ATVC and use a default value for the output value of each bias.
IMP-BNDG	Setting for banding improvement Perform idling with engagement of the developing assembly and disengagement of ETB.
AANY-0 / AANY-1	Setting of any-any mode 0 / any-any mode 1 Combination of any-any mode 0 / any-any mode 1 AANY-0=0/AANY-1=0: Perform constant-speed cleaning after a job only when the paper size does not match. AANY-0=1/AANY-1=0: Perform high-speed cleaning after all jobs. AANY-0=0/AANY-1=1: Perform constant-speed cleaning after all jobs. AANY-0=1/AANY-1=1: Perform high-speed cleaning after a job only when the paper size does not match.

<SPLMAN>

T-18-30

COPIER > FUNCTION > SPLMAN	
Sub item	**Description**
SPL27767	Setting of high-resistance paper Decrease the final output value of transfer bias by 250V. (Only when high-humidity OHT/high-humidity gloss film is not specified) Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]

COPIER > FUNCTION > SPLMAN	
Sub item	**Description**
SPL27267	Setting of 4mil OHT Decrease the final output value of transfer bias by 500V. (Only when high-humidity OHT/high-humidity gloss film/high-resistance paper is not specified) Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL23866	Setting of calcium carbonate paper Apply the maximum attraction bias wherever possible regardless of the environment. Since there is no result of detection of attraction paper resistance, set a transfer bias from the environment. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL25407	Setting of thin paper/rough paper Change the process speed to 4/5 speed. Use the temperature control table for thin paper/rough paper. (Thin paper only) Do not change the process speed, but change the temperature control table. (Plain paper, Thick paper 2 only) Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL47267	Setting of high-humidity OHT Decrease the final output value of transfer bias by 100V. (OHT only) Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL47667	Setting of prevention of re-transfer Decrease the transfer bias for the 3rd/4th station depending on the environment. (Only when high-humidity OHT/high-humidity gloss film/high-resistance paper/4mil OHT is not specified) Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL34691	Setting for improvement of color misregistration Rotate the fixing motor in +0.5% speed up to the 10th page. Secure the wait time of 10 seconds when the 1st page is picked up at the time of initial rotation, mode switching, or toner ejection. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL14682	Setting for prevention of fogging 2 Turn off the pre-exposure operation. Do not add a transfer bias as measures to prevent a bird's foot print on the trailing edge. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL25200	Setting for improvement of OHT transparency Set the controlled temperature at 180 degC, and perform idling of the fixing machine for 45 seconds before initial rotation. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL53649	Setting of engagement for monochrome mode Perform full engagement of the ETB. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL35607	Setting of measures for hot offset Decrease the controlled temperature by 10 degC without exception. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL14660	Not used
SPL65676	Switching of the margin at the lead edge (in the direction of increasing the margin) Increase the margin at the lead edge of the paper. The standard margin is set if the setting conflicts with that of the decreased margin at the lead edge. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL65677	Switching of the margin at the lead edge (in the direction of decreasing the margin) Decrease the margin at the lead edge of the paper. The standard margin is set if the setting conflicts with that of the increased margin at the lead edge. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL68676	Switching of the margin at the right/left side (in the direction of increasing the margin) Increase the margin at the right and left side of the paper. The standard margin is set if the setting conflicts with that of the decreased margin at the right/left side. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL68677	Switching of the margin at the right/left side (in the direction of decreasing the margin) Decrease the margin at the right and left side of the paper. The standard margin is set if the setting conflicts with that of the increased margin at the right/left side. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL25607	Switching of the print mode setting Switch the print mode for "plain paper" from "Normal" to "Light" as measures for hot offset at overseas countries. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]

18.2.4.2 FUNCTION List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<INSTALL>

T-18-31

COPIER > FUNCTION > INSTALL	
Sub item	**Description**
CARD	Not used
E-RDS	Enabling/disabling of the e-RDS function Setting value: 0: Disabled, 1: Enabled [Factory setting value/Value after RAM clearing: 0]

COPIER > FUNCTION > INSTALL	
Sub item	**Description**
RGW-PORT	Setting of the port number of the sales company's server used for E-RDS Refer to the port number in the user mode. Setting range: 1 to 65535 [Factory setting value/Value after RAM clearing: 443]
COM-TEST	Confirmation of the connection with the sales company's server used for E-RDS Try to connect the sales company's server. Make a judgment of whether connection has been made or not, and display the result by OK or NG.
COM-LOG	Display of a communication error log Display the detailed result of communication test with the sales company's server used for E-RDS. When an error occurs in communication with the sales company's server, error information is displayed. <Log contents> Number: No. 1 is assigned to the latest one. Error code: 8-digit hexadecimal number Date: Date when the error occurred Time: Time when the error occurred Detailed error information: 128 characters maximum 5 logs maximum
RGW-ADR	Setting of the URL of the sales company's server used for E-RDS Set the URL of the sales company's server. Setting value: URL (incl. NULL, SJIS is not supported) (128 characters maximum)
CNT-DATE	Setting of the date and time to start sending counter information to the server(It is displayed after the eRDS 3rd party license is entered.) Set the date and time to start sending counter information to the server using the E-RDS third-party extended function. Refer to the date and time setting in the user mode. (12 digits: YYYYMMDDHHMM) YYYY: Year, MM: Month, DD: Day, HH: Hour, MM: Minute) Setting range: 2000/1/1 00:00 to 2037/12/31 23.59 [Factory setting value/Value after RAM clearing: 000000000000]
CNT-INTV	Setting of the interval for sending counter information to the server(It is displayed after the eRDS 3rd party license is entered.) Set the interval of sending counter information to the server using the E-RDS third-party extended function. Setting range: 1 to 168 (Unit: 1 week) [Factory setting value/Value after RAM clearing: 24]
STRD-POS	Automatic detection of the DF stream reading CCD reading position Execute this item after performing any of the replacement of the ADF unit, replacement of the reader unit, or RAM clearing for the scanner. [Operation] The reading position is adjusted while the scanner continues to move by 0.1 mm. [Time] When the lamp lights up: Adjustment time: 10 sec When the lamp does not light up: Lamp adjustment time of 10 to 30 sec + Adjustment time of 10 sec [Displays] 0: Operating / 1: OK / 2: NG

<ATTRACT>
Not used
<DPC>
Not used
<CST>
Not used
<CLEANING>
Not used
<FIXING>
Not used
<PANEL>

T-18-32

COPIER > FUNCTION > PANEL	
Sub item	**Description**
LCD-CHK	Not used
LED-CHK	Not used
LED-OFF	Not used
KEY-CHK	Not used

<PART-CHK>
Not used
<CLEAR>

T-18-33

COPIER > FUNCTION > CLEAR	
Sub item	**Description**
R-CON	Not used
TEL-USER	Clearing of user data and data registered in the address book SSSW is not cleared.
SRVC-DAT	Clearing of SERVICE DATA User data is not cleared.
COUNTER	Clearing of the maintenance/parts counter and mode counter to 0 Clear the counter (numerator) on the system dump list to 0.

COPIER > FUNCTION > CLEAR		
Sub item		**Description**
TYPE		Initialization of USER DATA and SERVICE DATA for the specified destination setting Japan: JAPAN USA: U.S.A. Europe: EUROPE 1(area) / U.K. / SWEDEN / SWISS / AUSTRIA / DENMARK / NORWAY / HOLLAND / BERUGIUM / FINLAND / ITALY / SPAIN / PORTUGAL / IRELAND / HUNGARY / SAF / GERMANY / FRANCE / CZECH / SLOVENIA / PORLAND / GREECE/ LUXEMBOURG / RUSSIA / EUROPE 2(area) Australia: AUSTRALIA / N.Z. China: CHINA Korea: KOREA Taiwan: TAIWAN Asia: SINGAPORE / HONG KONG / MALAYSIA / ASIA(area) Note) STANDARD / CANADA are not in use.
HIST	**ACT-HIST**	Clearing of the communication management history
	ACC-HIST	Clearing of the print history
	JAM-HIST	Clearing of the jam history
	ERR-HIST	Clearing of the error (E code) history
	ALARM	Not used
	ENV-HIST	Not used
CARD		Clearing of the connection information of a new card reader equipment Clear data related to card IDs (department). Operation method 1) Set the department management in user registration to OFF. 2) Execute this item. 3) Execute COPIER>FUNCTION>CLEAR>ERR>E719. 4) Turn off the main power switch. 5) Remove the control card equipment. 6) Turn on the main power switch.
ERR	**E355-CLR**	Operation is enabled by entering a specific password.
	E719-CLR	Clearing of E719 Clear the connection information of the control card equipment and coin robo.
PWD-CLR		Clearing of the password of a system administrator
FILE-SYS		Initialization of the file system for the main and optional ROMs (File decompression)
FORMAT	**FMT-USB**	Not used
	FMT-LDRV	Not used
	FMT-SD	Not used
	CER-DRV	Format the /APL_GEN directory of the NAND file system.
	FMT-LANG	Format the /BOOTDEV directory of the NAND file system.
	512	Not used
	1024	Not used
	2048	Not used
CA-KEY		Initialization of the CA certificate installed (Only displayed after the activation of e-RDS function)
ERDS-DAT		Initialization of e-RDS parameters (Only displayed after the activation of e-RDS function) - ERDS SWITCH - RGW-ADDRESS - RGW-PORT - CNT-DATE - CNT-INTV - COM-LOG
DEPT-USR		Setting the ID management by department and user management to OFF
SYS-INFO		Clearing of the system administration password
ALL		Clearing of the following items - USER DATA - SERVICE DATA - JOB ID - Histories - Clearing date MEMO: USER DATA/SERVICE DATA are initialized for the default destination setting.
EAM-DAT		Not used
ELA-DAT		Not used

<MISC-R>

T-18-34

COPIER > FUNCTION > MISC-R	
Sub item	**Description**
SCANLAMP	Turning on the scanning lamp

<MISC-P>

T-18-35

COPIER > FUNCTION > MISC-P		
Sub item		**Description**
MISC-SW		Not used
MISC-NUM		Not used
OUTPUT	**SRVC-DAT**	Output of the system data list/system dump list
	SYS-DAT	Output of the system data list Mainly output the report of each service software switch and parameter used for FAX function.
	SYS-DMP	Output of the system dump list Output the service data such as the number of communication, number of received sheets, number of sent sheets, number of recording sheets, and number of errors, etc.
	CNTR	Output of the counter report Display the counter indicating how often the function of reading, recording, communication, and copy operation is performed.
	ERR-LOG	Output of error logs
	SPEC	Output of the spec report Print the current equipment condition.
	ERDS-COM	Output of e-RDS communication error logs
	SRVC-LBL	Output of the service level print

<SENS-ADJ>
Not used
<SYSTEM>

T-18-36

COPIER > FUNCTION > SYSTEM	
Sub item	**Description**
DOWNLOAD	Switching to the download mode

<HV-TR>
Not used
<CCD>

T-18-37

COPIER > FUNCTION > CCD	
Sub item	**Description**
DF-WLVL1	Not used
DF-WLVL2	Not used

<PARAM>

T-18-38

COPIER > FUNCTION > PARAM	
Sub item	**Description**
SYS-SW	Registration of system parameters (See the table shown below.)

T-18-39

COPIER > FUNCTION > PARAM > SYS-SW			
SW	**Bit**	**Function**	**Remarks**
2	6	Import/export via USB	default: 0
5	6	2a.m. reset (0: Reset/*1:Not reset)	default: 1
9	0	Display/hide of PS>data protocol menu (1: Display, *0: Hide)	
	3	Forcibly deactivate the uniFLOW function (1: ON, *0: OFF) If turning ON this switch, and turning OFF and then ON the device power while the uniFLOW function is in active state, the uniFLOW function is forcibly deactivated. In addition, when this switch is ON, Activate/Deactivate request from the server is ignored.	

T-18-40

COPIER > FUNCTION > PARAM > SYS-NUM			
No.	**Function**	**Available setting range**	**Default**
10	Reboot time monitoring time for 2a.m. reset (at power-on) (Unit: time)	0-9999	6
15	Shift timer from energy saver mode to sleep (Unit: second)	0-9999	5
16	1W sleep shift timer (Unit: second)	0-9999	720
18	Shift timer from energy saver 4 or energy saver 2 to standby (Unit: second)	0-9999	60
19	Power supply relay protection wait timer (Unit: second)	0-9999	720
24	Print-related warning (no paper) alert wait timer (Unit: second)	0-9999	20
25	IMG1L initialization wait timer (Unit: millisecond)	0-9999	100
26	IMG1L mask setting wait timer (Unit: millisecond)	0-9999	10

COPIER > FUNCTION > PARAM > SYS-NUM			
No.	**Function**	**Available setting range**	**Default**
39	Switching of the default of LDAP detailed search condition	0:contains 1:does not contain 2:equals 3:differs from 4:begins with* 5:ends with	
40	eLA card touch sound	0:OFF,1:ON(default)	
41	PS mode 1 (8bit)	0 - 60(default:0)	
42	PS mode 2 (8bit)	0 - 60(default:0)	
57	Setting of paper size group	Setting values and groups are as follow: 1: AB configuration (PAPER_SIZE_GROUP_AB) 2: A configuration (PAPER_SIZE_GROUP_A) 3: INCH configuration (PAPER_SIZE_GROUP_INCH) 4: AB/INCH configuration (PAPER_SIZE_GROUP_AB_INCH) Timing to be initialized is as follow: - CLEAR > ALL - CLEAR > TYPE - CLEAR > SERVICE DATA - CLEAR -> TEL&USER DATA (because of synchronizing the values of ATT_ID and SYSTEM NUMERIC) - When starting/ending the process - Select country at startup	
60	Secondary Battery charging completion wait timer (Unit: minute) When the value is 0, it is 120 minutes.	0-9999	0
61	Pulse trickle charge set timmer (Unit: second) When the value is 0, it is 300 minutes.	0-9999	0
62	Engine adjustment timer (Unit: second)	0-9999	0
63	Engine adjustment timer (Unit: minute)	0-9999	0
64	Engine adjustment timer (Unit: hour)	0-9999	0 (When the values of SYS-NUM 62, 63, and 64 are 0, default is 2.)

T-18-41

COPIER > FUNCTION > PARAM		
Sub item		**Description**
FAX-SW		Not used
FAX-NUM		Not used
NET-SW		SW01 to SW50
NETNUM		001 to 050
NET-CERT	**VERSION**	CA certificate version
	SRLNUM	Serial number
	SIGALG	Signature algorithm
	ISSUER	Issuer
	VLD_FROM	Commencement date of the expiration period
	VLD_TO	Finishing date of the expiration period
	SUBJECT	Subject of issuance
	PUB_KEY	Public key algorithm and size
	THMB_PRT	Digest (Thumb imprint)
CDC-SW		Not used
CDC-NUM		Not used
EXC-NAVI		Switch for whether or not to start up the installation navigation When setting this switch to 1 after the installation navigation is completed, the installation navigation does not start up at the time of next activation. Setting value: 0: Start up the navigation. 1: Do not start up the navigation. [Factory setting value/Value after RAM clearing: 0]
DSP-PPRSE		Setting of whether or not to display the paper setting screen when ACS setting is set to ON at the time of copy operation Setting value: 0: Do not display the screen. 1: Display the screen. [Factory setting value/Value after RAM clearing: 0]
SET-PPRSZ		Setting of the ACS document size when DSP-PPRSEL is set to ON When the document size is unknown, a screen prompting an operator to enter the document size is displayed. When the sizes other than UNKNOWN are specified, ACS judgment processing is performed based on the specified document size. Setting range: 0 to 20 Setting value: 0: UNKNOWN, 2: A4, 3: A5, 7: B5, 12: LGL, 13: LTR, 60: STMT [Factory setting value/Value after RAM clearing: 0]
DSP-TNROW		Setting of whether or not to display "Toner Low" Setting value: 0: Do not display the screen. 1: Display the screen. [Factory setting value/Value after RAM clearing: 1]

COPIER > FUNCTION > PARAM	
Sub item	**Description**
SCAN-SW	Not used
SCAN-NUM	Not used
APS-LTLG	Switching of whether or not to display "Automatic (LTR/LGL)" Setting value: 0: Do not display the item, 1: Display the item [Factory setting value/Value after RAM clearing: 0: iR C1028/ iR C1028i/ iR C1028iF/ iR C1030/ iR C1030iF 1: Other models]
DSP-SCWD	Switching of whether or not to enable [Scan to Store] > [Store on Memory Media] Setting value: 0: Enable the function, 1: Disable the function [Factory setting value/Value after RAM clearing: 0]
DSP-MDPR	Switching of whether or not to enable [Direct Print] Setting value: 0: Enable the function, 1: Disable the function [Factory setting value/Value after RAM clearing: 0]
DSP-ACS	Switching of whether or not to display [ACS Function Adjustment] when selecting [Additional Func.] > [Adjustment/Cleaning] > [ACS Function Adjustment]. Setting value: 0: Do not display the item, 1: Display the item [Factory setting value/Value after RAM clearing: 0: iR C1028/ iR C1028i/ iR C1028iF/ iR C1030/ iR C1030iF for North America, Europe, and Australia 1: Other models]

<PRINTER>

T-18-42

COPIER > FUNCTION > PRINTER	
Sub item	**Description**
SYS-SW	Not used
SYS-NUM	Not used

<VIFFNC>

T-18-43

COPIER > FUNCTION > VIFFNC	
Sub item	**Description**
RSTR-DCN	Restoration of the backup information of DC controller NVRAM retained in the controller's NVRAM to the DC controller NVRAM Perform the following procedure after replacement of the DC controller PCB. 1) Using this item, restore the backup data of the DC controller retained in the NVRAM of the main controller PCB to the NVRAM of the DC controller PCB. 2) Print the user data list by selecting "Initial setting/registration > Report output > List print > User data list". 3) Execute full correction by selecting "Initial setting/registration > Adjustment > Cleaning > Automatic gradation correction > Full correction".
CLR-DCN	Clear of the backup information of DC controller NVRAM retained in the controller's NVRAM to the DC controller NVRAM
SEL-TALC	Setting of TALC paper ETB cleaning is performed 10 times at initial rotation.
INV-ATVC	Setting to enable ATVC Ignore ATVC and use a default value for the output value of each bias.
IMP-BNDG	Setting for banding improvement Perform idling with engagement of the developing assembly and disengagement of ETB.
AANY-0 / AANY-1	Setting of any-any mode 0 / any-any mode 1 Combination of any-any mode 0 / any-any mode 1 AANY-0=0/AANY-1=0: Perform constant-speed cleaning after a job only when the paper size does not match. AANY-0=1/AANY-1=0: Perform high-speed cleaning after all jobs. AANY-0=0/AANY-1=1: Perform constant-speed cleaning after all jobs. AANY-0=1/AANY-1=1: Perform high-speed cleaning after a job only when the paper size does not match.

<SPLMAN>

T-18-44

COPIER > FUNCTION > SPLMAN	
Sub item	**Description**
SPL27767	Setting of high-resistance paper Decrease the final output value of transfer bias by 250V. (Only when high-humidity OHT/high-humidity gloss film is not specified) Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL27267	Setting of 4mil OHT Decrease the final output value of transfer bias by 500V. (Only when high-humidity OHT/high-humidity gloss film/high-resistance paper is not specified) Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL23866	Setting of calcium carbonate paper Apply the maximum attraction bias wherever possible regardless of the environment. Since there is no result of detection of attraction paper resistance, set a transfer bias from the environment. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL25407	Setting of thin paper/rough paper Change the process speed to 4/5 speed. Use the temperature control table for thin paper/rough paper. (Thin paper only) Do not change the process speed, but change the temperature control table. (Plain paper, Thick paper 2 only) Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]

COPIER > FUNCTION > SPLMAN	
Sub item	**Description**
SPL47267	Setting of high-humidity OHT Decrease the final output value of transfer bias by 100V. (OHT only) Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL47667	Setting of prevention of re-transfer Decrease the transfer bias for the 3rd/4th station depending on the environment. (Only when high-humidity OHT/high-humidity gloss film/high-resistance paper/4mil OHT is not specified) Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL34691	Setting for improvement of color misregistration Rotate the fixing motor in +0.5% speed up to the 10th page. Secure the wait time of 10 seconds when the 1st page is picked up at the time of initial rotation, mode switching, or toner ejection. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL14682	Setting for prevention of fogging 2 Turn off the pre-exposure operation. Do not add a transfer bias as measures to prevent a bird's foot print on the trailing edge. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL25200	Setting for improvement of OHT transparency Set the controlled temperature at 180 degC, and perform idling of the fixing machine for 45 seconds before initial rotation. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL53649	Setting of engagement for monochrome mode Perform full engagement of the ETB. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL35607	Setting of measures for hot offset Decrease the controlled temperature by 10 degC without exception. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL14660	Not used
SPL65676	Switching of the margin at the lead edge (in the direction of increasing the margin) Increase the margin at the lead edge of the paper. The standard margin is set if the setting conflicts with that of the decreased margin at the lead edge. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL65677	Switching of the margin at the lead edge (in the direction of decreasing the margin) Decrease the margin at the lead edge of the paper. The standard margin is set if the setting conflicts with that of the increased margin at the lead edge. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL68676	Switching of the margin at the right/left side (in the direction of increasing the margin) Increase the margin at the right and left side of the paper. The standard margin is set if the setting conflicts with that of the decreased margin at the right/left side. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL68677	Switching of the margin at the right/left side (in the direction of decreasing the margin) Decrease the margin at the right and left side of the paper. The standard margin is set if the setting conflicts with that of the increased margin at the right/left side. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]
SPL25607	Switching of the print mode setting Switch the print mode for "plain paper" from "Normal" to "Light" as measures for hot offset at overseas countries. Setting value: 0: OFF, 1: ON [Factory setting value/Value after RAM clearing: 0]

18.2.4.3 Adjustment of the ACS identification level

imageRUNNER C1022 / imageRUNNER C1022i

When using the auto color selection function (ACS mode) with ADF, the machine may misidentify the black/white original and the color original depending on the statuses and types of originals.

On the assumption that the maintenance service contract will be made with customers, the value of identification level is adjusted at the factory in advance to prevent the extra charge due to the machine erroneously identifying a B&W original as a color original. And in addition, the additional functions mode is hidden to prevent the customers from changing the identification level.

Following is the procedures to adjust the identification level to prevent the machine from identifying a color original as a B&W original upon user's request etc.
1) Enter the service mode. (main menu > 2 > 8 > main menu)
2) Change the value of the following service mode item from "0" to "1".
   COPIER > FUNCTION > PARAM > DSP-ACS
3) Turn OFF/ON the main power switch.
4) Change the following additional function mode setting.
   Select: Additional func. > Adjustment/Cleaning > ACS Function Adjustment > Feeder, and change the value by 1 scale toward "color priority" side.

5) Enter the service mode. (main menu > 2 > 8 > main menu)
6) Change the value of the following service mode item from "1" to "0".
   COPIER > FUNCTION > PARAM > DSP-ACS
7) Turn OFF/ON the main power switch.

Following is the service modes and the additional function modes related to the ACS identification level adjustment.
- Service mode: COPIER > FUNCTION > PARAM > DSP-ACS
  To display/hide the additional function's items:
  0: Hide (default)
  1: Display
- Additional function mode: Additional Func. > Adjustment/Cleaning > ACS Function Adjustment > Feeder
  Adjustment of ACS identification level when feeder is in use

Setting range: Color priority <- ->B&W priority (7 levels)
Default: 1 scale shifted from the center toward B&W priority

F-18-7

18.2.4.4 Adjustment of the ACS identification level

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

When using the auto color selection function (ACS mode) with ADF, the machine may misidentify the black/white original and the color original depending on the statuses and types of originals.

On the assumption that the maintenance service contract will be made with customers, the value of identification level is adjusted at the factory in advance to prevent the extra charge due to the machine erroneously identifying a B&W original as a color original. And in addition, the additional functions mode is hidden to prevent the customers from changing the identification level.

Following is the procedures to adjust the identification level to prevent the machine from identifying a color original as a B&W original upon user's request etc.
1) Enter the service mode. (main menu > 2 > 8 > main menu)
2) Change the value of the following service mode item from "0" to "1".
COPIER > FUNCTION > PARAM > DSP-ACS
3) Turn OFF/ON the main power switch.
4) Change the following additional function mode setting.
Select: Additional func. > Adjustment/Cleaning > ACS Function Adjustment > Feeder, and change the value by 1 scale toward "color priority" side.

5) Enter the service mode. (main menu > 2 > 8 > main menu)
6) Change the value of the following service mode item from "1" to "0".
COPIER > FUNCTION > PARAM > DSP-ACS
7) Turn OFF/ON the main power switch.

Following is the service modes and the additional function modes related to the ACS identification level adjustment.
- Service mode: COPIER > FUNCTION > PARAM > DSP-ACS
To display/hide the additional function's items:
0: Hide (default)
1: Display
- Additional function mode: Additional Func. > Adjustment/Cleaning > ACS Function Adjustment > Feeder
Adjustment of ACS identification level when feeder is in use
Setting range: Color priority <- ->B&W priority (7 levels)
Default: 1 scale shifted from the center toward B&W priority

F-18-8

18.2.5 OPTION

18.2.5.1 OPTION List

imageRUNNER C1022 / imageRUNNER C1022i

<BODY>

T-18-45

COPIER > OPTION > BODY	
Sub item	**Description**
DFDST-L1	Adjustment of the level of dust detection when DF is used (Correction of an interval between sheets) When the value is increased, the dust detection level is increased. (This makes it easier to detect the dust causing low-density lines.) Setting range: 1 to 9999
DFDST-L2	Adjustment of the level of dust detection when DF is used (Detection after a job) When the value is increased, the dust detection level is increased. (This makes it easier to detect the dust causing low-density lines.) Setting range: 1 to 9999
TMIC-BK	Switching of the method of correcting the end of TMIC_BK_PASCAL_LUT (high-density area) Setting value: 0: Correction of the end of BK_LUT for PDL is set to OFF. Correction of the end of Bk_LUT for copy operation is set to OFF. 1: Correction of the end of BK_LUT for PDL is set to ON. Correction of the end of Bk_LUT for copy operation is set to ON. [Factory setting value/Value after RAM clearing: 1]
AST-SEL	AST-SEL for the change of the advanced smoothing range (AST level SELect) Setting range: 0 to 3 [Factory setting value/Value after RAM clearing: 2]
TMIC-CMY	Switching of the method of correcting the end of TMIC_PASCAL_LUT (high-density area) 0: Correction of the end of LUT for PDL is set to OFF. Correction of the end of LUT for copy operation is set to OFF. 1: Correction of the end of LUT for PDL is set to ON. Correction of the end of LUT for copy operation is set to ON. [Factory setting value/Value after RAM clearing: 1]
TMC-SLCT	Switching of the coefficient used for error diffusion correction Setting value: 0: Small granularity for CMYK 1: Small granularity for CMY, Large granularity + large stability for K 2: Large granularity + large stability for CMYK [Factory setting value/Value after RAM clearing: 0]
IFXEML-Z	Control of the additional function of the attribute flag when printing a message received by email Setting value: 0: For PDL_Text mode (CardDirect_Gray Correction ODM + Background On) 1: For PDL_Photo mode (CardDirect_Normal ODM + Background Off) 2: For Scan_Photo mode (CardDirect_Normal ODM + Background On) [Factory setting value/Value after RAM clearing: 0] * The Text mode is set as default because it is considered that many of the email messages contain documents mixed with text. ODM for CardDirect is used regardless of PDL or Scan because there is a restriction in terms of input/output color space.

<USER>

T-18-46

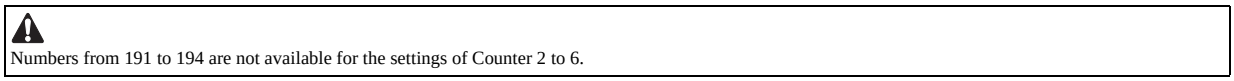
COPIER > OPTION > USER	
Sub item	**Description**
COUNTER1	Not used
COUNTER2	Selection of the counter type for Counter 2 Setting range: 0 to 999 [Factory setting value/Value after RAM clearing: (Reference: External and Controls > Counters)]
COUNTER3	Selection of the counter type for Counter 3 Setting range: 0 to 999 [Factory setting value/Value after RAM clearing: (Reference: External and Controls > Counters)]
COUNTER4	Selection of the counter type for Counter 4 Setting range: 0 to 999 [Factory setting value/Value after RAM clearing: (Reference: External and Controls > Counters)]
COUNTER5	Selection of the counter type for Counter 5 Setting range: 0 to 999 [Factory setting value/Value after RAM clearing: (Reference: External and Controls > Counters)]
COUNTER6	Selection of the counter type for Counter 6 Setting range: 0 to 999 [Factory setting value/Value after RAM clearing: (Reference: External and Controls > Counters)]
CNT-SW	Switching of the type of counter display Setting range: 0 to 4 [Factory setting value/Value after RAM clearing: 0]
TNRB-SW	Switch the display of the toner cartridge replacement counter*. * It counts the number of times the toner cartridge is replaced to a new one. Setting value: 0: Do not display the toner cartridge replacement counter. 1: Display the toner cartridge replacement counter. [Factory setting value/Value after RAM clearing: 0]
SCALL-SW	Turning ON/OFF service call button (Maintenance Request button) function Setting value: 0: Call button function OFF 1: Call button function ON [Factory setting value/Value after RAM clearing: 0]
SCALLCMP	Actions when repair of service call button (Maintenance Request button) function is completed Used when actions for a repair request are completed.

Software counter specifications
100 to 199: Total
200 to 299: Copy (When more numbers are needed, add the number from 001.)
300 to 399: Print
400 to 499: Copy and print
500 to 599: Scan

600 to 699: Box, Media/Pic/Mobile phone print
700 to 799: Reception print
800 to 899: Report print
900 to 999: Sending/Box/Remote/Media

<Explanation of the symbols in the table>
- yes: Valid counter for this machine

- Large size: Paper larger than B4-size
- Small size: B4-size or smaller paper
- Numbers 1, 2 indicated under "Counter Details": Number of counts for large size paper
- Total A: Total number of counts for operation other than "local copy + remote copy"
- Total B: Total number of counts for operation other than "local copy + remote copy + Box print"
- Copy: Local copy + remote copy + Box print
- Copy A: Local copy + remote copy + Box print
- Print: PDL print + report print + Box print
- Print A: PDL print + report print
- Scan: B&W scan + color scan


Numbers from 191 to 194 are not available for the settings of Counter 2 to 6.

T-18-47

Compatibility	No.	Counter description
yes	101	Total 1
yes	102	Total 2
	103	Total (large)
yes	104	Total (small)
yes	105	Total (full-color 1)
yes	106	Total (full-color 2)
yes	108	Total (black and white 1)
yes	109	Total (black and white 2)
	110	Total (monocolor/large)
	111	Total (monocolor/small)
	112	Total (black and white/large)
yes	113	Total (black and white/small)
yes	114	Total 1 (two-sided)
yes	115	Total 2 (two-sided)
	116	Large (two-sided)
yes	117	Small (two-sided)
	118	Total (monocolor 1)
	119	Total (monocolor 2)
	120	Total (full-color/large)
yes	121	Total (full-color/small)
	122	Total (full-color + monocolor/large)
yes	123	Total (full-color + monocolor/small)
yes	124	Total (full-color + monocolor 2)
yes	125	Total (full-color + monocolor 1)
yes	126	Total A1
yes	127	Total A2
	128	Total A (large)
yes	129	Total A (small)
yes	130	Total A (full color 1)
yes	131	Total A (full color 2)
yes	132	Total A (black and white 1)
yes	133	Total A (black and white 2)
	134	Total A (mono color /large)
	135	Total A (mono color /small)
	136	Total A (black and white /large)
yes	137	Total A (black and white /small)
yes	138	Total A 1(double sided)
yes	139	Total A 2(double sided)
	140	large A (double sided)
yes	141	small A (double sided)
	142	Total A (mono color 1)
	143	Total A (mono color 2)
	144	Total A (full color /large)
yes	145	Total A (full color /small)
	146	Total A (full color +mono color /large)
yes	147	Total A (full color +mono color /small)
yes	148	Total A (full color +mono color 2)
yes	149	Total A (full color +mono color 1)

Compatibility	No.	Counter description
yes	150	Total B1
yes	151	Total B2
	152	Total B (large)
yes	153	Total B (small)
yes	154	Total B (full color 1)
yes	155	Total B (full color 2)
yes	156	Total B (black and white 1)
yes	157	Total B (black and white 2)
	158	Total B (mono color /large)
	159	Total B (mono color /small)
	160	Total B (black and white /large)
yes	161	Total B (black and white /small)
yes	162	Total B1 (double sided)
yes	163	Total B2 (double sided)
	164	large B (double sided)
yes	165	small B (double sided)
	166	Total B (mono color 1)
	167	Total B (mono color 2)
	168	Total B (full color /large)
yes	169	Total B (full color /small)
	170	Total B (full color +mono color /large)
yes	171	Total B (full color +mono color /small)
yes	172	Total B (full color +mono color 2)
yes	173	Total B (full color +mono color 1)
yes	191	Toner replacement / yellow
yes	192	Toner replacement / magenta
yes	193	Toner replacement / cyan
yes	194	Toner replacement / black
	195	Toner replacement / expansion 1
	196	Toner replacement / expansion 2
yes	201	Copies (total 1)
yes	202	Copies (total 2)
	203	Copies (large)
yes	204	Copies (small)
yes	205	Copies A (total 1)
yes	206	Copies A (total 2)
	207	Copies A (large)
yes	208	Copies A (small)
yes	209	Local copies (total 1)
yes	210	Local copies (total 2)
	211	Local copies (large)
yes	212	Local copies (small)
	213	Remote copies (total 1)
	214	Remote copies (total 2)
	215	Remote copies (large)
	216	Remote copies (small)
yes	217	Copies (full-color 1)
yes	218	Copies (full-color 2)
	219	Copies (monocolor 1)
	220	Copies (monocolor 2)
yes	221	Copies (black and white 1)
yes	222	Copies (black and white 2)
	223	Copies (full-color/large)
yes	224	Copies (full-color/small)
	225	Copies (monocolor/large)
	226	Copies (monocolor/small)
	227	Copies (black and white/large)
yes	228	Copies (black and white/small)
	229	Copies (full-color + monocolor/large)
yes	230	Copies (full-color + monocolor/small)
yes	231	Copies (full-color + monocolor/2)
yes	232	Copies (full-color + monocolor/1)
	233	Copies (full-color/large/two-sided)
yes	234	Copies (full-color/small/two-sided)
	235	Copies (monocolor/large/two-sided)
	236	Copies (monocolor/small/two-sided)

Compatibility	No.	Counter description
	237	Copies (black and white/large/two-sided)
yes	238	Copies (black and white/small/two-sided)
yes	245	Copies A (full-color 1)
yes	246	Copies A (full-color 2)
	247	Copies A (monocolor 1)
	248	Copies A (monocolor 2)
yes	249	Copies A (black and white 1)
yes	250	Copies A (black and white 2)
	251	Copies A (full-color/large)
yes	252	Copies A (full-color/small)
	253	Copies A (monocolor/large)
	254	Copies A (monocolor/small)
	255	Copies A (black and white/large)
yes	256	Copies A (black and white/small)
	257	Copies A (full-color + mono-color/large)
yes	258	Copies A (full-color + mono-color/small)
yes	259	Copies A (full-color + mono-color 2)
yes	260	Copies A (full-color + mono-color 1)
	261	Copies A (full-color/large/two-sided)
yes	262	Copies A (full-color/small/two-sided)
	263	Copies A (monocolor/large/two-sided)
	264	Copies A (monocolor/small/two-sided)
	265	Copies A (black and white/large/two-sided)
yes	266	Copies A (black and white/small/two-sided)
	273	Local copies (full-color 1)
	274	Local copies (full-color 2)
	275	Local copies (monocolor 1)
	276	Local copies (monocolor 2)
yes	277	Local copies (black and white 1)
yes	278	Local copies (black and white 2)
	279	Local copies (full-color/large)
yes	280	Local copies (full-color/small)
	281	Local copies (monocolor/large)
	282	Local copies (monocolor/small)
	283	Local copies (black and white/large)
yes	284	Local copies (black and white/small)
	285	Local copies (full-color + mono-color/large)
yes	286	Local copies (full-color + mono-color/large)
yes	287	Local copies (full-color + mono-color 2)
yes	288	Local copies (full-color + mono-color 1)
	289	Local copies (full-color/large/two-sided)
yes	290	Local copies (full-color/small/two-sided)
	291	Local copies (monocolor/large/two-sided)
	292	Local copies (monocolor/small/two-sided)
	293	Local copies (black and white/large/two-sided)
yes	294	Local copies (black and white/small/two-sided)
	002	Remote copies (full-color 1)
	003	Remote copies (full-color 2)
	004	Remote copies (monocolor 1)
	005	Remote copies (monocolor 2)
	006	Remote copies (black and white 1)
	007	Remote copies (black and white 2)
	008	Remote copies (full-color/large)
	009	Remote copies (full-color/small)
	010	Remote copies (monocolor/large)
	011	Remote copies (monocolor/small)
	012	Remote copies (black and white/large)
	013	Remote copies (black and white/small)
	014	Remote copies (full-color + monocolor/large)
	015	Remote copies (full-color + monocolor/small)
	016	Remote copies (full-color + monocolor 2)
	017	Remote copies (full-color + monocolor 1)
	018	Remote copies (full-color/large/two-sided)
	019	Remote copies (full-color/small/two-sided)
	020	Remote copies (monocolor/large/two-sided)
	021	Remote copies (monocolor/small/two-sided)

Compatibility	No.	Counter description
	022	Remote copies (black and white/large/two-sided)
	023	Remote copies (black and white/small/two-sided)
yes	301	Prints (total 1)
yes	302	Prints (total 2)
	303	Prints (large)
yes	304	Prints (small)
yes	305	Prints A (total 1)
yes	306	Prints A (total 2)
	307	Prints A (large)
yes	308	Prints A (small)
yes	309	Prints (full-color 1)
yes	310	Prints (full-color 2)
	311	Prints (monocolor 1)
	312	Prints (monocolor 2)
yes	313	Prints (black and white 1)
yes	314	Prints (black and white 2)
	315	Prints (full-color/large)
yes	316	Prints (full-color/small)
	317	Prints (monocolor/large)
	318	Prints (monocolor/small)
	319	Prints (black and white/large)
yes	320	Prints (black and white/small)
	321	Prints (full-color + monocolor/large)
yes	322	Prints (full-color + monocolor/small)
yes	323	Prints (full-color + monocolor/2)
yes	324	Prints (full-color + monocolor/1)
	325	Prints (full-color/large/two-sided)
yes	326	Prints (full-color/small/two-sided)
	327	Prints (monocolor/large/two-sided)
	328	Prints (monocolor/small/two-sided)
	329	Prints (black and white/large/two-sided)
yes	330	Prints (black and white/small/two-sided)
yes	331	PDL prints (total 1)
yes	332	PDL prints (total 2)
	333	PDL prints (large)
yes	334	PDL prints (small)
yes	335	PDL prints (full-color 1)
yes	336	PDL prints (full-color 2)
yes	339	PDL prints (black and white 1)
yes	340	PDL prints (black and white 2)
	341	PDL prints (full-color/large)
yes	342	PDL prints (full-color/small)
	345	PDL prints (black and white/large)
yes	346	PDL prints (black and white/small)
	351	PDL prints (full-color/large/two-sided)
yes	352	PDL prints (full-color/small/two-sided)
	355	PDL prints (black and white/large/two-sided)
yes	356	PDL prints (black and white/small/two-sided)
	401	Copies + prints (full-color/large)
yes	402	Copies + prints (full-color/small)
	403	Copies + prints (black and white/large)
yes	404	Copies + prints (black and white/small)
yes	405	Copies + prints (black and white 2)
yes	406	Copies + prints (black and white 1)
	407	Copies + prints (full-color + monocolor/large)
yes	408	Copies + prints (full-color + monocolor/small)
yes	409	Copies + prints (full-color + monocolor/2)
yes	410	Copies + prints (full-color + monocolor/1)
	411	Copies + prints (large)
yes	412	Copies + prints (small)
yes	413	Copies + prints (2)
yes	414	Copies + prints (1)
	415	Copies + prints (monocolor/large)
	416	Copies + prints (monocolor/small)
	417	Copies + prints (full-color/large/two-sided)
yes	418	Copies + prints (full-color/small/two-sided)

Compatibility	No.	Counter description
	419	Copies + prints (monocolor/large/two-sided)
	420	Copies + prints (monocolor/small/two-sided)
	421	Copies + prints (black and white/large/two-sided)
yes	422	Copies + prints (black and white/small/two-sided)
yes	501	Scans (total 1)
	502	Scans (total 2)
	503	Scans (large)
	504	Scans (small)
yes	505	Black and white scans (total 1)
yes	506	Black and white scans (total 2)
	507	Black and white scans (large)
yes	508	Black and white scans (small)
yes	509	Color scans (total 1)
yes	510	Color scans (total 2)
	511	Color scans (large)
yes	512	Color scans (small)
	601	Box prints (total 1)
	602	Box prints (total 2)
	603	Box prints (large)
	604	Box prints (small)
	605	Box prints (full-color 1)
	606	Box prints (full-color 2)
	607	Box prints (monocolor 1)
	608	Box prints (monocolor 2)
	609	Box prints (black and white 1)
	610	Box prints (black and white 2)
	611	Box prints (full-color/large)
	612	Box prints (full-color/small)
	613	Box prints (monocolor/large)
	614	Box prints (monocolor/small)
	615	Box prints (black and white/large)
	616	Box prints (black and white/small)
	617	Box prints (full-color + monocolor/large)
	618	Box prints (full-color + monocolor/small)
	619	Box prints (full-color + monocolor 2)
	620	Box prints (full-color + monocolor 1)
	621	Box prints (full-color/large/two-sided)
	622	Box prints (full-color/small/two-sided)
	623	Box prints (monocolor/large/two-sided)
	624	Box prints (monocolor/small/two-sided)
	625	Box prints (black and white/large/two-sided)
	626	Box prints (black and white/small/two-sided)
yes	631	Media prints (total 1)
yes	632	Media prints (total 2)
	633	Media prints (large)
yes	634	Media prints (small)
yes	635	Media prints (full-color 1)
yes	636	Media prints (full-color 2)
	637	Media prints (monocolor 1)
	638	Media prints (monocolor 2)
yes	639	Media prints (black and white 1)
yes	640	Media prints (black and white 2)
	641	Media prints (full-color/large)
yes	642	Media prints (full-color/small)
	643	Media prints (monocolor/large)
	644	Media prints (monocolor/small)
	645	Media prints (black and white/large)
yes	646	Media prints (black and white/small)
	647	Media prints (full-color + monocolor/large)
yes	648	Media prints (full-color + monocolor/small)
yes	649	Media prints (full-color + monocolor 2)
yes	650	Media prints (full-color + monocolor 1)
	651	Media prints (full-color/large/two-sided)
	652	Media prints (full-color/small/two-sided)
	653	Media prints (monocolor/large/two-sided)
	654	Media prints (monocolor/small/two-sided)

Compatibility	No.	Counter description
	655	Media prints (black and white/large/two-sided)
	656	Media prints (black and white/small/two-sided)
	661	PictBridge (total 1)
	662	PictBridge (total 2)
	663	PictBridge (large)
	664	PictBridge (small)
	665	PictBridge (full-color 1)
	666	PictBridge (full-color 2)
	667	PictBridge (monocolor 1)
	668	PictBridge (monocolor 2)
	669	PictBridge (black and white 1)
	670	PictBridge (black and white 2)
	671	PictBridge (full-color/large)
	672	PictBridge (full-color/small)
	673	PictBridge (monocolor/large)
	674	PictBridge (monocolor/small)
	675	PictBridge (black and white/large)
	676	PictBridge (black and white/small)
	677	PictBridge (full-color + monocolor/large)
	678	PictBridge (full-color + monocolor/small)
	679	PictBridge (full-color + monocolor 2)
	680	PictBridge (full-color + monocolor 1)
	681	PictBridge (full-color/large/two-sided)
	682	PictBridge (full-color/small/two-sided)
	683	PictBridge (monocolor/large/two-sided)
	684	PictBridge (monocolor/small/two-sided)
	685	PictBridge (black and white/large/two-sided)
	686	PictBridge (black and white/small/two-sided)
yes	701	Received prints (total 1)
yes	702	Received prints (total 2)
	703	Received prints (large)
yes	704	Received prints (small)
yes	705	Received prints (full-color 1)
yes	706	Received prints (full-color 2)
	707	Received prints (gray scale 1)
	708	Received prints (gray scale 2)
yes	709	Received prints (black and white 1)
yes	710	Received prints (black and white 2)
	711	Received prints (full-color/large)
yes	712	Received prints (full-color/small)
	713	Received prints (gray scale/large)
	714	Received prints (gray scale/small)
	715	Received prints (black and white/large)
yes	716	Received prints (black and white/small)
	717	Received prints (full-color + gray scale/large)
yes	718	Received prints (full-color + gray scale/small)
yes	719	Received prints (full-color + gray scale 2)
yes	720	Received prints (full-color + gray scale 1)
	721	Received prints (full-color/large/two-sided)
yes	722	Received prints (full-color/small/two-sided)
	723	Received prints (gray scale/large/two-sided)
	724	Received prints (gray scale/small/two-sided)
	725	Received prints (black and white/large/two-sided)
yes	726	Received prints (black and white/small/two-sided)
yes	801	Report prints (total 1)
yes	802	Report prints (total 2)
	803	Report prints (large)
yes	804	Report prints (small)
yes	805	Report prints (full-color 1)
yes	806	Report prints (full-color 2)
	807	Report prints (gray scale 1)
	808	Report prints (gray scale 2)
yes	809	Report prints (black and white 1)
yes	810	Report prints (black and white 2)
	811	Report prints (full-color/large)
yes	812	Report prints (full-color/small)

Compatibility	No.	Counter description
	813	Report prints (gray scale/large)
	814	Report prints (gray scale/small)
	815	Report prints (black and white/large)
yes	816	Report prints (black and white/small)
	817	Report prints (full-color + gray scale/large)
yes	818	Report prints (full-color + gray scale/small)
yes	819	Report prints (full-color + gray scale 2)
yes	820	Report prints (full-color + gray scale 1)
	821	Report prints (full-color/large/two-sided)
yes	822	Report prints (full-color/small/two-sided)
	823	Report prints (gray scale/large/two-sided)
	824	Report prints (gray scale/small/two-sided)
	825	Report prints (black and white/large/two-sided)
yes	826	Report prints (black and white/small/two-sided)
	901	Copy scan total 1 (color)
	902	Copy scan total 1 (black and white)
	903	Copy scan total 2 (color)
	904	Copy scan total 2 (black and white)
	905	Copy scan total 3 (color)
	906	Copy scan total 3 (black and white)
	907	Copy scan total 4 (color)
	908	Copy scan total 4 (black and white)
	909	Local copy scans (color)
	910	Local copy scans (black and white)
	911	Remote copy scans (color)
	912	Remote copy scans (black and white)
	913	Sent scan total 1 (color)
	914	Sent scan total 1 (black and white)
yes	915	Sent scan total 2 (color)
yes	916	Sent scan total 2 (black and white)
yes	917	Sent scan total 3 (color)
yes	918	Sent scan total 3 (black and white)
	919	Sent scan total 4 (color)
	920	Sent scan total 4 (black and white)
yes	921	Sent scan total 5 (color)
yes	922	Sent scan total 5 (black and white)
yes	929	Sent scan total 6 (color)
yes	930	Sent scan total 6 (black and white)
	931	Sent scan total 7 (color)
	932	Sent scan total 7 (black and white)
	933	Sent scan total 8 (color)
	934	Sent scan total 8 (black and white)
	935	Universal sent scan total (color)
	936	Universal sent scan total (black and white)
	937	Box scans (color)
	938	Box scans (black and white)
yes	939	Remote scans (color)
yes	940	Remote scans (black and white)
	941	Sent scans/faxes (color)
	942	Sent scans/faxes (black and white)
	943	Sent scans/I faxes (color)
	944	Sent scans/I faxes (black and white)
yes	945	Sent scans/e-mails (color)
yes	946	Sent scans/e-mails (black and white)
	947	Sent scans/FTP (color)
	948	Sent scans/FTP (black and white)
	949	Sent scans/SMB (color)
	950	Sent scans/SMB (black and white)
	951	Sent scans/IPX (color)
	952	Sent scans/IPX (black and white)
	953	Sent scans/databases (color)
	954	Sent scans/databases (black and white)
	955	Sent scans/local prints (color)
	956	Sent scans/local prints (black and white)
	957	Sent scans/box (color)
	958	Sent scans/box (black and white)

Compatibility	No.	Counter description
yes	959	Media scans (color)
yes	960	Media scans (black and white)

<CST>

T-18-48

COPIER > OPTION > CST	
Sub item	**Description**
CST-U1	Not used
CST-U2	Not used
CST-U3	Not used

<ACC>

T-18-49

COPIER > OPTION > ACC	
Sub item	**Description**
COIN	ON/OFF setting for the coin vendor display - Change the message on the control panel prompting an operator to set a control card to the one prompting him/her to insert a coin. Setting value: 0: Default message; "Set a control card." 1: Message for a coin vendor; "Insert a coin." [Factory setting value/Value after RAM clearing: 0]
CARD	Setting for installation of the new card reader Enter a card number. Setting range: 0 to 99999 [Factory setting value/Value after RAM clearing: 0] When a card number is entered, the following settings are made. - Initialize the information registered for department management. - Register the following number of cards based on the card number entered. MF9130/MF9150c/MF9170/MF9170C/MF9330C/MF9340C/MF9340C/MF9370C/iR C1021/iR C1021i/iR c1022/iR C1022i/iR C2110F/iR C2110N: 1000 cards MF8450/MF8450C: 100 cards However, the number of usable IDs is 99999 maximum. - When 0 is specified for the card number, the department ID is registered from 1.
CONTROL	Control of PDL printer output Setting value: 0: Perform printing without a card. 1: Perform printing when a card is inserted. [Factory setting value/Value after RAM clearing: 0]
CC-SPSW	Setting of whether or not to support the control card I/F (CC-V) Setting value: 0: Do not support the control card I/F. 1: Support the control card I/F. [Factory setting value/Value after RAM clearing: 0]

<INT-FACE>
Not used
<ASSPST-D>
Not used
<ASSPST-P>
Not used
<LCNS-OF>

T-18-50

COPIER > OPTION > LCNS-OF	
Disabling no transfer of license - ST-xxxx, Display of the installation status	
Sub item	**Description**
ST-SEND	Display of the installation status of the Send function when disabling no transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
ST-BRDIM	Display of the installation status of BarDIMM when disabling no transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
ST-ERDS	Display of the installation status of the 3rd party extended function for ERDS when disabling no transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
ST-PCL	Display of the installation status of PCL when disabling non transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
ST-EAM	Display of the installation status of EAM when disabling non transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
ST-ELA	Display of the installation status of ELA when disabling non transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]

<LCNS-TR>

T-18-51

COPIER > OPTION > LCNS-TR	
Disabling license transfer - ST-xxxx, Display of the installation status	
Sub item	**Description**
ST-SEND	Display of the installation status of the Send function when disabling license transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
TR-SEND	Display of the 24-digit license key
ST-BRDIM	Display of the installation status of BarDIMM when disabling license transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
TR-BRDIM	Display of the 24-digit license key
ST-ERDS	Display of the installation status of the 3rd party extended function for ERDS when disabling license transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
TR-ERDS	Display of the 24-digit license key
ST-PCL	Display of the installation status of PCL when disabling license transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
TR-PCL	Display of the 24-digit license key
ST-EAM	Display of the installation status of EAM function when disabling license transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
OF-EAM	Display of the 24-digit license key
ST-ELA	Display of the installation status of ELA function when disabling license transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
OF-ELA	Display of the 24-digit license key

18.2.5.2 OPTION List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<BODY>

T-18-52

COPIER > OPTION > BODY	
Sub item	**Description**
DFDST-L1	Adjustment of the level of dust detection when DF is used (Correction of an interval between sheets) When the value is increased, the dust detection level is increased. (This makes it easier to detect the dust causing low-density lines.) Setting range: 1 to 9999
DFDST-L2	Adjustment of the level of dust detection when DF is used (Detection after a job) When the value is increased, the dust detection level is increased. (This makes it easier to detect the dust causing low-density lines.) Setting range: 1 to 9999
TMIC-BK	Switching of the method of correcting the end of TMIC_BK_PASCAL_LUT (high-density area) Setting value: 0: Correction of the end of BK_LUT for PDL is set to OFF. Correction of the end of Bk_LUT for copy operation is set to OFF. 1: Correction of the end of BK_LUT for PDL is set to ON. Correction of the end of Bk_LUT for copy operation is set to ON. [Factory setting value/Value after RAM clearing: 1]
AST-SEL	AST-SEL for the change of the advanced smoothing range (AST level SELect) Setting range: 0 to 3 [Factory setting value/Value after RAM clearing: 2]
TMIC-CMY	Switching of the method of correcting the end of TMIC_PASCAL_LUT (high-density area) 0: Correction of the end of LUT for PDL is set to OFF. Correction of the end of LUT for copy operation is set to OFF. 1: Correction of the end of LUT for PDL is set to ON. Correction of the end of LUT for copy operation is set to ON. [Factory setting value/Value after RAM clearing: 1]
TMC-SLCT	Switching of the coefficient used for error diffusion correction Setting value: 0: Small granularity for CMYK 1: Small granularity for CMY, Large granularity + large stability for K 2: Large granularity + large stability for CMYK [Factory setting value/Value after RAM clearing: 0]
IFXEML-Z	Control of the additional function of the attribute flag when printing a message received by email Setting value: 0: For PDL_Text mode (CardDirect_Gray Correction ODM + Background On) 1: For PDL_Photo mode (CardDirect_Normal ODM + Background Off) 2: For Scan_Photo mode (CardDirect_Normal ODM + Background On) [Factory setting value/Value after RAM clearing: 0] * The Text mode is set as default because it is considered that many of the email messages contain documents mixed with text. ODM for CardDirect is used regardless of PDL or Scan because there is a restriction in terms of input/output color space.

<USER>

T-18-53

COPIER > OPTION > USER	
Sub item	**Description**
COUNTER1	Selection of the counter type for Counter 1 Setting range: 0 to 999 [Factory setting value/Value after RAM clearing: 101]

COPIER > OPTION > USER	
Sub item	**Description**
COUNTER2	Selection of the counter type for Counter 2 Setting range: 0 to 999 [Factory setting value/Value after RAM clearing: (Reference: External and Controls > Counters)]
COUNTER3	Selection of the counter type for Counter 3 Setting range: 0 to 999 [Factory setting value/Value after RAM clearing: (Reference: External and Controls > Counters)]
COUNTER4	Selection of the counter type for Counter 4 Setting range: 0 to 999 [Factory setting value/Value after RAM clearing: (Reference: External and Controls > Counters)]
COUNTER5	Selection of the counter type for Counter 5 Setting range: 0 to 999 [Factory setting value/Value after RAM clearing: (Reference: External and Controls > Counters)]
COUNTER6	Selection of the counter type for Counter 6 Setting range: 0 to 999 [Factory setting value/Value after RAM clearing: (Reference: External and Controls > Counters)]
CNT-SW	Switching of the type of counter display Setting range: 0 to 3 [Factory setting value/Value after RAM clearing: 0]
TNRB-SW	Switch the display of the toner cartridge replacement counter*. * It counts the number of times the toner cartridge is replaced to a new one. Setting value: 0: Do not display the toner cartridge replacement counter. 1: Display the toner cartridge replacement counter. [Factory setting value/Value after RAM clearing: 0]
SCALL-SW	Turning ON/OFF service call button (Maintenance Request button) function Setting value: 0: Call button function OFF 1: Call button function ON [Factory setting value/Value after RAM clearing: 0]
SCALLCMP	Actions when repair of service call button (Maintenance Request button) function is completed Used when actions for a repair request are completed.
DFLT-CPY	Set the standard mode. 0: ACS 1: Full color 2: B&W Default value for the country and region belong to "Group 1": 2 (B&W) Default value for other regions: 0 (ACS)

Software counter specifications
100 to 199: Total
200 to 299: Copy (When more numbers are needed, add the number from 001.)
300 to 399: Print
400 to 499: Copy and print
500 to 599: Scan
600 to 699: Box, Media/Pic/Mobile phone print
700 to 799: Reception print
800 to 899: Report print
900 to 999: Sending/Box/Remote/Media

<Explanation of the symbols in the table>
- yes: Valid counter for this machine

- Large size: Paper larger than B4-size
- Small size: B4-size or smaller paper
- Numbers 1, 2 indicated under "Counter Details": Number of counts for large size paper
- Total A: Total number of counts for operation other than "local copy + remote copy"
- Total B: Total number of counts for operation other than "local copy + remote copy + Box print"
- Copy: Local copy + remote copy + Box print
- Copy A: Local copy + remote copy + Box print
- Print: PDL print + report print + Box print
- Print A: PDL print + report print
- Scan: B&W scan + color scan

⚠
Numbers from 191 to 194 are not available for the settings of Counter 2 to 6.

T-18-54

Compatibility	No.	Counter description
yes	101	Total 1
yes	102	Total 2
	103	Total (large)
yes	104	Total (small)
yes	105	Total (full-color 1)
yes	106	Total (full-color 2)
yes	108	Total (black and white 1)
yes	109	Total (black and white 2)
	110	Total (monocolor/large)
	111	Total (monocolor/small)
	112	Total (black and white/large)
yes	113	Total (black and white/small)
yes	114	Total 1 (two-sided)

Compatibility	No.	Counter description
yes	115	Total 2 (two-sided)
	116	Large (two-sided)
yes	117	Small (two-sided)
	118	Total (monocolor 1)
	119	Total (monocolor 2)
	120	Total (full-color/large)
yes	121	Total (full-color/small)
	122	Total (full-color + monocolor/large)
yes	123	Total (full-color + monocolor/small)
yes	124	Total (full-color + monocolor 2)
yes	125	Total (full-color + monocolor 1)
yes	126	Total A1
yes	127	Total A2
	128	Total A (large)
yes	129	Total A (small)
yes	130	Total A (full color 1)
yes	131	Total A (full color 2)
yes	132	Total A (black and white 1)
yes	133	Total A (black and white 2)
	134	Total A (mono color /large)
	135	Total A (mono color /small)
	136	Total A (black and white /large)
yes	137	Total A (black and white /small)
yes	138	Total A 1(double sided)
yes	139	Total A 2(double sided)
	140	large A (double sided)
yes	141	small A (double sided)
	142	Total A (mono color 1)
	143	Total A (mono color 2)
	144	Total A (full color /large)
yes	145	Total A (full color /small)
	146	Total A (full color +mono color /large)
yes	147	Total A (full color +mono color /small)
yes	148	Total A (full color +mono color 2)
yes	149	Total A (full color +mono color 1)
yes	150	Total B1
yes	151	Total B2
	152	Total B (large)
yes	153	Total B (small)
yes	154	Total B (full color 1)
yes	155	Total B (full color 2)
yes	156	Total B (black and white 1)
yes	157	Total B (black and white 2)
	158	Total B (mono color /large)
	159	Total B (mono color /small)
	160	Total B (black and white /large)
yes	161	Total B (black and white /small)
yes	162	Total B1 (double sided)
yes	163	Total B2 (double sided)
	164	large B (double sided)
yes	165	small B (double sided)
	166	Total B (mono color 1)
	167	Total B (mono color 2)
	168	Total B (full color /large)
yes	169	Total B (full color /small)
	170	Total B (full color +mono color /large)
yes	171	Total B (full color +mono color /small)
yes	172	Total B (full color +mono color 2)
yes	173	Total B (full color +mono color 1)
yes	191	Toner replacement / yellow
yes	192	Toner replacement / magenta
yes	193	Toner replacement / cyan
yes	194	Toner replacement / black
	195	Toner replacement / expansion 1
	196	Toner replacement / expansion 2
yes	201	Copies (total 1)

Compatibility	No.	Counter description
yes	202	Copies (total 2)
	203	Copies (large)
yes	204	Copies (small)
yes	205	Copies A (total 1)
yes	206	Copies A (total 2)
	207	Copies A (large)
yes	208	Copies A (small)
yes	209	Local copies (total 1)
yes	210	Local copies (total 2)
	211	Local copies (large)
yes	212	Local copies (small)
	213	Remote copies (total 1)
	214	Remote copies (total 2)
	215	Remote copies (large)
	216	Remote copies (small)
yes	217	Copies (full-color 1)
yes	218	Copies (full-color 2)
	219	Copies (monocolor 1)
	220	Copies (monocolor 2)
yes	221	Copies (black and white 1)
yes	222	Copies (black and white 2)
	223	Copies (full-color/large)
yes	224	Copies (full-color/small)
	225	Copies (monocolor/large)
	226	Copies (monocolor/small)
	227	Copies (black and white/large)
yes	228	Copies (black and white/small)
	229	Copies (full-color + monocolor/large)
yes	230	Copies (full-color + monocolor/small)
yes	231	Copies (full-color + monocolor/2)
yes	232	Copies (full-color + monocolor/1)
	233	Copies (full-color/large/two-sided)
yes	234	Copies (full-color/small/two-sided)
	235	Copies (monocolor/large/two-sided)
	236	Copies (monocolor/small/two-sided)
	237	Copies (black and white/large/two-sided)
yes	238	Copies (black and white/small/two-sided)
yes	245	Copies A (full-color 1)
yes	246	Copies A (full-color 2)
	247	Copies A (monocolor 1)
	248	Copies A (monocolor 2)
yes	249	Copies A (black and white 1)
yes	250	Copies A (black and white 2)
	251	Copies A (full-color/large)
yes	252	Copies A (full-color/small)
	253	Copies A (monocolor/large)
	254	Copies A (monocolor/small)
	255	Copies A (black and white/large)
yes	256	Copies A (black and white/small)
	257	Copies A (full-color + mono-color/large)
yes	258	Copies A (full-color + mono-color/small)
yes	259	Copies A (full-color + mono-color 2)
yes	260	Copies A (full-color + mono-color 1)
	261	Copies A (full-color/large/two-sided)
yes	262	Copies A (full-color/small/two-sided)
	263	Copies A (monocolor/large/two-sided)
	264	Copies A (monocolor/small/two-sided)
	265	Copies A (black and white/large/two-sided)
yes	266	Copies A (black and white/small/two-sided)
	273	Local copies (full-color 1)
	274	Local copies (full-color 2)
	275	Local copies (monocolor 1)
	276	Local copies (monocolor 2)
yes	277	Local copies (black and white 1)
yes	278	Local copies (black and white 2)
	279	Local copies (full-color/large)

Compatibility	No.	Counter description
yes	280	Local copies (full-color/small)
	281	Local copies (monocolor/large)
	282	Local copies (monocolor/small)
	283	Local copies (black and white/large)
yes	284	Local copies (black and white/small)
	285	Local copies (full-color + mono-color/large)
yes	286	Local copies (full-color + mono-color/large)
yes	287	Local copies (full-color + mono-color 2)
yes	288	Local copies (full-color + mono-color 1)
	289	Local copies (full-color/large/two-sided)
yes	290	Local copies (full-color/small/two-sided)
	291	Local copies (monocolor/large/two-sided)
	292	Local copies (monocolor/small/two-sided)
	293	Local copies (black and white/large/two-sided)
yes	294	Local copies (black and white/small/two-sided)
	002	Remote copies (full-color 1)
	003	Remote copies (full-color 2)
	004	Remote copies (monocolor 1)
	005	Remote copies (monocolor 2)
	006	Remote copies (black and white 1)
	007	Remote copies (black and white 2)
	008	Remote copies (full-color/large)
	009	Remote copies (full-color/small)
	010	Remote copies (monocolor/large)
	011	Remote copies (monocolor/small)
	012	Remote copies (black and white/large)
	013	Remote copies (black and white/small)
	014	Remote copies (full-color + monocolor/large)
	015	Remote copies (full-color + monocolor/small)
	016	Remote copies (full-color + monocolor 2)
	017	Remote copies (full-color + monocolor 1)
	018	Remote copies (full-color/large/two-sided)
	019	Remote copies (full-color/small/two-sided)
	020	Remote copies (monocolor/large/two-sided)
	021	Remote copies (monocolor/small/two-sided)
	022	Remote copies (black and white/large/two-sided)
	023	Remote copies (black and white/small/two-sided)
yes	301	Prints (total 1)
yes	302	Prints (total 2)
	303	Prints (large)
yes	304	Prints (small)
yes	305	Prints A (total 1)
yes	306	Prints A (total 2)
	307	Prints A (large)
yes	308	Prints A (small)
yes	309	Prints (full-color 1)
yes	310	Prints (full-color 2)
	311	Prints (monocolor 1)
	312	Prints (monocolor 2)
yes	313	Prints (black and white 1)
yes	314	Prints (black and white 2)
	315	Prints (full-color/large)
yes	316	Prints (full-color/small)
	317	Prints (monocolor/large)
	318	Prints (monocolor/small)
	319	Prints (black and white/large)
yes	320	Prints (black and white/small)
	321	Prints (full-color + monocolor/large)
yes	322	Prints (full-color + monocolor/small)
yes	323	Prints (full-color + monocolor/2)
yes	324	Prints (full-color + monocolor/1)
	325	Prints (full-color/large/two-sided)
yes	326	Prints (full-color/small/two-sided)
	327	Prints (monocolor/large/two-sided)
	328	Prints (monocolor/small/two-sided)
	329	Prints (black and white/large/two-sided)

Compatibility	No.	Counter description
yes	330	Prints (black and white/small/two-sided)
yes	331	PDL prints (total 1)
yes	332	PDL prints (total 2)
	333	PDL prints (large)
yes	334	PDL prints (small)
yes	335	PDL prints (full-color 1)
yes	336	PDL prints (full-color 2)
yes	339	PDL prints (black and white 1)
yes	340	PDL prints (black and white 2)
	341	PDL prints (full-color/large)
yes	342	PDL prints (full-color/small)
	345	PDL prints (black and white/large)
yes	346	PDL prints (black and white/small)
	351	PDL prints (full-color/large/two-sided)
yes	352	PDL prints (full-color/small/two-sided)
	355	PDL prints (black and white/large/two-sided)
yes	356	PDL prints (black and white/small/two-sided)
	401	Copies + prints (full-color/large)
yes	402	Copies + prints (full-color/small)
	403	Copies + prints (black and white/large)
yes	404	Copies + prints (black and white/small)
yes	405	Copies + prints (black and white 2)
yes	406	Copies + prints (black and white 1)
	407	Copies + prints (full-color + monocolor/large)
yes	408	Copies + prints (full-color + monocolor/small)
yes	409	Copies + prints (full-color + monocolor/2)
yes	410	Copies + prints (full-color + monocolor/1)
	411	Copies + prints (large)
yes	412	Copies + prints (small)
yes	413	Copies + prints (2)
yes	414	Copies + prints (1)
	415	Copies + prints (monocolor/large)
	416	Copies + prints (monocolor/small)
	417	Copies + prints (full-color/large/two-sided)
yes	418	Copies + prints (full-color/small/two-sided)
	419	Copies + prints (monocolor/large/two-sided)
	420	Copies + prints (monocolor/small/two-sided)
	421	Copies + prints (black and white/large/two-sided)
yes	422	Copies + prints (black and white/small/two-sided)
yes	501	Scans (total 1)
	502	Scans (total 2)
	503	Scans (large)
	504	Scans (small)
yes	505	Black and white scans (total 1)
yes	506	Black and white scans (total 2)
	507	Black and white scans (large)
yes	508	Black and white scans (small)
yes	509	Color scans (total 1)
yes	510	Color scans (total 2)
	511	Color scans (large)
yes	512	Color scans (small)
	601	Box prints (total 1)
	602	Box prints (total 2)
	603	Box prints (large)
	604	Box prints (small)
	605	Box prints (full-color 1)
	606	Box prints (full-color 2)
	607	Box prints (monocolor 1)
	608	Box prints (monocolor 2)
	609	Box prints (black and white 1)
	610	Box prints (black and white 2)
	611	Box prints (full-color/large)
	612	Box prints (full-color/small)
	613	Box prints (monocolor/large)
	614	Box prints (monocolor/small)
	615	Box prints (black and white/large)

Compatibility	No.	Counter description
	616	Box prints (black and white/small)
	617	Box prints (full-color + monocolor/large)
	618	Box prints (full-color + monocolor/small)
	619	Box prints (full-color + monocolor 2)
	620	Box prints (full-color + monocolor 1)
	621	Box prints (full-color/large/two-sided)
	622	Box prints (full-color/small/two-sided)
	623	Box prints (monocolor/large/two-sided)
	624	Box prints (monocolor/small/two-sided)
	625	Box prints (black and white/large/two-sided)
	626	Box prints (black and white/small/two-sided)
yes	631	Media prints (total 1)
yes	632	Media prints (total 2)
	633	Media prints (large)
yes	634	Media prints (small)
yes	635	Media prints (full-color 1)
yes	636	Media prints (full-color 2)
	637	Media prints (monocolor 1)
	638	Media prints (monocolor 2)
yes	639	Media prints (black and white 1)
yes	640	Media prints (black and white 2)
	641	Media prints (full-color/large)
yes	642	Media prints (full-color/small)
	643	Media prints (monocolor/large)
	644	Media prints (monocolor/small)
	645	Media prints (black and white/large)
yes	646	Media prints (black and white/small)
	647	Media prints (full-color + monocolor/large)
yes	648	Media prints (full-color + monocolor/small)
yes	649	Media prints (full-color + monocolor 2)
yes	650	Media prints (full-color + monocolor 1)
	651	Media prints (full-color/large/two-sided)
	652	Media prints (full-color/small/two-sided)
	653	Media prints (monocolor/large/two-sided)
	654	Media prints (monocolor/small/two-sided)
	655	Media prints (black and white/large/two-sided)
	656	Media prints (black and white/small/two-sided)
	661	PictBridge (total 1)
	662	PictBridge (total 2)
	663	PictBridge (large)
	664	PictBridge (small)
	665	PictBridge (full-color 1)
	666	PictBridge (full-color 2)
	667	PictBridge (monocolor 1)
	668	PictBridge (monocolor 2)
	669	PictBridge (black and white 1)
	670	PictBridge (black and white 2)
	671	PictBridge (full-color/large)
	672	PictBridge (full-color/small)
	673	PictBridge (monocolor/large)
	674	PictBridge (monocolor/small)
	675	PictBridge (black and white/large)
	676	PictBridge (black and white/small)
	677	PictBridge (full-color + monocolor/large)
	678	PictBridge (full-color + monocolor/small)
	679	PictBridge (full-color + monocolor 2)
	680	PictBridge (full-color + monocolor 1)
	681	PictBridge (full-color/large/two-sided)
	682	PictBridge (full-color/small/two-sided)
	683	PictBridge (monocolor/large/two-sided)
	684	PictBridge (monocolor/small/two-sided)
	685	PictBridge (black and white/large/two-sided)
	686	PictBridge (black and white/small/two-sided)
yes	701	Received prints (total 1)
yes	702	Received prints (total 2)
	703	Received prints (large)

Compatibility	No.	Counter description
yes	704	Received prints (small)
yes	705	Received prints (full-color 1)
yes	706	Received prints (full-color 2)
	707	Received prints (gray scale 1)
	708	Received prints (gray scale 2)
yes	709	Received prints (black and white 1)
yes	710	Received prints (black and white 2)
	711	Received prints (full-color/large)
yes	712	Received prints (full-color/small)
	713	Received prints (gray scale/large)
	714	Received prints (gray scale/small)
	715	Received prints (black and white/large)
yes	716	Received prints (black and white/small)
	717	Received prints (full-color + gray scale/large)
yes	718	Received prints (full-color + gray scale/small)
yes	719	Received prints (full-color + gray scale 2)
yes	720	Received prints (full-color + gray scale 1)
	721	Received prints (full-color/large/two-sided)
yes	722	Received prints (full-color/small/two-sided)
	723	Received prints (gray scale/large/two-sided)
	724	Received prints (gray scale/small/two-sided)
	725	Received prints (black and white/large/two-sided)
yes	726	Received prints (black and white/small/two-sided)
yes	801	Report prints (total 1)
yes	802	Report prints (total 2)
	803	Report prints (large)
yes	804	Report prints (small)
yes	805	Report prints (full-color 1)
yes	806	Report prints (full-color 2)
	807	Report prints (gray scale 1)
	808	Report prints (gray scale 2)
yes	809	Report prints (black and white 1)
yes	810	Report prints (black and white 2)
	811	Report prints (full-color/large)
yes	812	Report prints (full-color/small)
	813	Report prints (gray scale/large)
	814	Report prints (gray scale/small)
	815	Report prints (black and white/large)
yes	816	Report prints (black and white/small)
	817	Report prints (full-color + gray scale/large)
yes	818	Report prints (full-color + gray scale/small)
yes	819	Report prints (full-color + gray scale 2)
yes	820	Report prints (full-color + gray scale 1)
	821	Report prints (full-color/large/two-sided)
yes	822	Report prints (full-color/small/two-sided)
	823	Report prints (gray scale/large/two-sided)
	824	Report prints (gray scale/small/two-sided)
	825	Report prints (black and white/large/two-sided)
yes	826	Report prints (black and white/small/two-sided)
	901	Copy scan total 1 (color)
	902	Copy scan total 1 (black and white)
	903	Copy scan total 2 (color)
	904	Copy scan total 2 (black and white)
	905	Copy scan total 3 (color)
	906	Copy scan total 3 (black and white)
	907	Copy scan total 4 (color)
	908	Copy scan total 4 (black and white)
	909	Local copy scans (color)
	910	Local copy scans (black and white)
	911	Remote copy scans (color)
	912	Remote copy scans (black and white)
	913	Sent scan total 1 (color)
	914	Sent scan total 1 (black and white)
yes	915	Sent scan total 2 (color)
yes	916	Sent scan total 2 (black and white)
yes	917	Sent scan total 3 (color)

Compatibility	No.	Counter description
yes	918	Sent scan total 3 (black and white)
	919	Sent scan total 4 (color)
	920	Sent scan total 4 (black and white)
yes	921	Sent scan total 5 (color)
yes	922	Sent scan total 5 (black and white)
yes	929	Sent scan total 6 (color)
yes	930	Sent scan total 6 (black and white)
	931	Sent scan total 7 (color)
	932	Sent scan total 7 (black and white)
	933	Sent scan total 8 (color)
	934	Sent scan total 8 (black and white)
	935	Universal sent scan total (color)
	936	Universal sent scan total (black and white)
	937	Box scans (color)
	938	Box scans (black and white)
yes	939	Remote scans (color)
yes	940	Remote scans (black and white)
	941	Sent scans/faxes (color)
	942	Sent scans/faxes (black and white)
	943	Sent scans/I faxes (color)
	944	Sent scans/I faxes (black and white)
yes	945	Sent scans/e-mails (color)
yes	946	Sent scans/e-mails (black and white)
	947	Sent scans/FTP (color)
	948	Sent scans/FTP (black and white)
	949	Sent scans/SMB (color)
	950	Sent scans/SMB (black and white)
	951	Sent scans/IPX (color)
	952	Sent scans/IPX (black and white)
	953	Sent scans/databases (color)
	954	Sent scans/databases (black and white)
	955	Sent scans/local prints (color)
	956	Sent scans/local prints (black and white)
	957	Sent scans/box (color)
	958	Sent scans/box (black and white)
yes	959	Media scans (color)
yes	960	Media scans (black and white)

<CST>

T-18-55

COPIER > OPTION > CST	
Sub item	**Description**
CST-U1	Not used
CST-U2	Not used
CST-U3	Not used

<ACC>

T-18-56

COPIER > OPTION > ACC	
Sub item	**Description**
COIN	ON/OFF setting for the coin vendor display - Change the message on the control panel prompting an operator to set a control card to the one prompting him/her to insert a coin. Setting value: 0: Default message; "Set a control card." 1: Message for a coin vendor; "Insert a coin." [Factory setting value/Value after RAM clearing: 0]
CARD	Setting for installation of the new card reader Enter a card number. Setting range: 0 to 99999 [Factory setting value/Value after RAM clearing: 0] When a card number is entered, the following settings are made. - Initialize the information registered for department management. - Register the following number of cards based on the card number entered. MF9280C/ iR C1028/ iR C1028i/ iR C1028iF/ iR C1030/ iR C1030iF: 1000 cards MF9220C: 100 cards However, the number of usable IDs is 99999 maximum. - When 0 is specified for the card number, the department ID is registered from 1.

COPIER > OPTION > ACC	
Sub item	**Description**
CONTROL	Control of PDL printer output Setting value: 0: Perform printing without a card. 1: Perform printing when a card is inserted. [Factory setting value/Value after RAM clearing: 0]
CC-SPSW	Setting of whether or not to support the control card I/F (CC-V) Setting value: 0: Do not support the control card I/F. 1: Support the control card I/F. [Factory setting value/Value after RAM clearing: 0]

<INT-FACE>
Not used
<ASSPST-D>
Not used
<ASSPST-P>
Not used
<LCNS-OF>

T-18-57

COPIER > OPTION > LCNS-OF	
Disabling no transfer of license - ST-xxxx, Display of the installation status	
Sub item	**Description**
ST-SEND	Display of the installation status of the Send function when disabling no transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
ST-BRDIM	Display of the installation status of BarDIMM when disabling no transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
ST-ERDS	Display of the installation status of the 3rd party extended function for ERDS when disabling no transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
ST-PCL	Display of the installation status of PCL when disabling non transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
ST-EAM	Display of the installation status of EAM when disabling non transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
ST-ELA	Display of the installation status of ELA when disabling non transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
ST-SPDF	Display of the installation status of the searchable PDF function when disabling no transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
ST-PS	Display of the installation status of the PS function when disabling no transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]

<LCNS-TR>

T-18-58

COPIER > OPTION > LCNS-TR	
Disabling license transfer - ST-xxxx, Display of the installation status	
Sub item	**Description**
ST-SEND	Display of the installation status of the Send function when disabling license transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
TR-SEND	Display of the 24-digit license key
ST-BRDIM	Display of the installation status of BarDIMM when disabling license transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
TR-BRDIM	Display of the 24-digit license key
ST-ERDS	Display of the installation status of the 3rd party extended function for ERDS when disabling license transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
TR-ERDS	Display of the 24-digit license key
ST-PCL	Display of the installation status of PCL when disabling license transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
TR-PCL	Display of the 24-digit license key
ST-EAM	Display of the installation status of EAM function when disabling license transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
TR-EAM	Not used
ST-ELA	Display of the installation status of ELA function when disabling license transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
TR-ELA	Not used

COPIER > OPTION > LCNS-TR	
Disabling license transfer - ST-xxxx, Display of the installation status	
Sub item	**Description**
ST-SPDF	Display of the installation status of the searchable PDF function when disabling transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
TR-SPDF	Display of the 24-digit license key
ST-PS	Display of the installation status of the PS function when disabling transfer Setting value: 0: ON, 1: OFF [Factory setting value/Value after RAM clearing: 0]
TR-PS	Display of the 24-digit license key

18.2.6 COUNTER

18.2.6.1 COUNTER List

imageRUNNER C1022 / imageRUNNER C1022i

<TOTAL>

T-18-59

COPIER > COUNTER > TOTAL	
Display/setting/adjustment range: 00000000 to 99999999 When 99999999 is exceeded, the value returns to 00000000.	
Sub item	**Description**
SERVICE1	Total counter for service: 1 Count up the counter value when the paper is delivered to outside of the printer. (Perform count-up regardless of large or small size.)
SERVICE2	Total counter for service: 2 Count up the counter value when the paper is delivered to outside of the printer. (Count up the value by 2 for large size, and 1 for small size.)
TTL	Total counter (copy + printer + FAX + composite function)
COPY	Total copy counter Count up the counter value when copy operation is executed and the paper is delivered to outside of the printer.
PDL-PRT	PDL print counter Count up the counter value when the paper is delivered to outside or stacked in double-sided mode according to the charging counter at the time of PDL printing. Do not perform count-up when a blank sheet is delivered or stacked. Count up the value by 1 for large and small sizes.
FAX-PRT	FAX reception print counter Count up the counter value when the paper is delivered to outside or stacked in double-sided mode according to the charging counter at the time of FAX reception. Do not perform count-up when a blank sheet is delivered or stacked. Count up the value by 1 for large and small sizes. The counter value can be cleared.
RPT-PRT	Report print counter Count up the counter value when the paper is delivered to outside or stacked in double-sided mode according to the charging counter at the time of report printing. Do not perform count-up when a blank sheet is delivered or stacked. Count up the value by 1 for large and small sizes. The counter value can be cleared.
2-SIDE	Double-sided copy/print counter Count up the number of times double-sided copying/printing is performed when the paper is delivered to outside or stacked in double-sided mode according to the charging counter. Do not perform count-up when a blank sheet is delivered or stacked. Count up the value by 1 for large and small sizes. The counter value can be cleared.
SCAN	Scanning counter Count up the number of times scanning is performed when reading is completed according to the charging counter. Count up the value by 1 for large and small sizes. The counter value can be cleared.

<PICK-UP>

T-18-60

COPIER > COUNTER > PICK-UP	
Display/setting/adjustment range: 00000000 to 99999999 When 99999999 is exceeded, the value returns to 00000000.	
Sub item	**Description**
C1	Cassette pickup total counter Display the number of sheets picked up from Cassette.
C2	Option cassette pickup total counter Display the number of sheets picked up from option cassette.
C3	Not used
C4	Not used
MF	Manual feed total counter Display the number of sheets picked up from the manual feed pickup unit.
DK	Not used
2-SIDE	Double-sided pickup total counter Display the number of sheets picked up in double-sided mode.

<FEEDER>

T-18-61

COPIER > COUNTER > FEEDER	
Display/setting/adjustment range: 00000000 to 99999999 When 99999999 is exceeded, the value returns to 00000000.	
Sub item	**Description**
FEED	Total counter for documents picked up by ADF
DFOP-CNT	Not used

<JAM>

T-18-62

COPIER > COUNTER > JAM	
Display/setting/adjustment range: 00000000 to 99999999 When 99999999 is exceeded, the value returns to 00000000.	
Sub item	**Description**
TOTAL	Total jam counter
FEEDER	Feeder total jam counter
SORTER	Not used
2-SIDE	Duplexing unit jam counter
MF	Multi-feeder jam counter
C1	Cassette jam counter
C2	Option cassette jam counter
C3	Not used
C4	Not used

<MISC>

T-18-63

COPIER > COUNTER > MISC	
Sub item	**Description**
WST-TNR	Not used

<DRBL-2>

T-18-64

COPIER > COUNTER > DRBL-2	
Display/setting/adjustment range: 00000000 to 99999999 When 99999999 is exceeded, the value returns to 00000000. Use this item as a guide to know the timing of replacement of consumable parts. Be sure to clear the value after the replacement of parts.	
Sub item	**Description**
DF-SP-PD	Number of times the paper goes through the ADF separation pad Display range: 0 to 999999 (Limit: 50000) [Factory setting value/Value after RAM clearing: 0]
DF-SP-RL	Number of times the paper goes through the ADF separation roller Display range: 0 to 999999 (Limit: 50000) [Factory setting value/Value after RAM clearing: 0]

18.2.6.2 COUNTER List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<TOTAL>

T-18-65

COPIER > COUNTER > TOTAL	
Display/setting/adjustment range: 00000000 to 99999999 When 99999999 is exceeded, the value returns to 00000000.	
Sub item	**Description**
SERVICE1	Total counter for service: 1 Count up the counter value when the paper is delivered to outside of the printer. (Perform count-up regardless of large or small size.)
SERVICE2	Total counter for service: 2 Count up the counter value when the paper is delivered to outside of the printer. (Count up the value by 2 for large size, and 1 for small size.)
TTL	Total counter (copy + printer + FAX + composite function)
COPY	Total copy counter Count up the counter value when copy operation is executed and the paper is delivered to outside of the printer.
PDL-PRT	PDL print counter Count up the counter value when the paper is delivered to outside or stacked in double-sided mode according to the charging counter at the time of PDL printing. Do not perform count-up when a blank sheet is delivered or stacked. Count up the value by 1 for large and small sizes.
FAX-PRT	FAX reception print counter Count up the counter value when the paper is delivered to outside or stacked in double-sided mode according to the charging counter at the time of FAX reception. Do not perform count-up when a blank sheet is delivered or stacked. Count up the value by 1 for large and small sizes. The counter value can be cleared.

COPIER > COUNTER > TOTAL	
Display/setting/adjustment range: 00000000 to 99999999 When 99999999 is exceeded, the value returns to 00000000.	
Sub item	**Description**
RPT-PRT	Report print counter Count up the counter value when the paper is delivered to outside or stacked in double-sided mode according to the charging counter at the time of report printing. Do not perform count-up when a blank sheet is delivered or stacked. Count up the value by 1 for large and small sizes. The counter value can be cleared.
2-SIDE	Double-sided copy/print counter Count up the number of times double-sided copying/printing is performed when the paper is delivered to outside or stacked in double-sided mode according to the charging counter. Do not perform count-up when a blank sheet is delivered or stacked. Count up the value by 1 for large and small sizes. The counter value can be cleared.
SCAN	Scanning counter Count up the number of times scanning is performed when reading is completed according to the charging counter. Count up the value by 1 for large and small sizes. The counter value can be cleared.

<PICK-UP>

T-18-66

COPIER > COUNTER > PICK-UP	
Display/setting/adjustment range: 00000000 to 99999999 When 99999999 is exceeded, the value returns to 00000000.	
Sub item	**Description**
C1	Cassette pickup total counter Display the number of sheets picked up from Cassette.
C2	Option cassette pickup total counter Display the number of sheets picked up from option cassette.
C3	Not used
C4	Not used
MF	Manual feed total counter Display the number of sheets picked up from the manual feed pickup unit.
DK	Not used
2-SIDE	Double-sided pickup total counter Display the number of sheets picked up in double-sided mode.

<FEEDER>

T-18-67

COPIER > COUNTER > FEEDER	
Display/setting/adjustment range: 00000000 to 99999999 When 99999999 is exceeded, the value returns to 00000000.	
Sub item	**Description**
FEED	Total counter for documents picked up by ADF
DFOP-CNT	Not used

<JAM>

T-18-68

COPIER > COUNTER > JAM	
Display/setting/adjustment range: 00000000 to 99999999 When 99999999 is exceeded, the value returns to 00000000.	
Sub item	**Description**
TOTAL	Total jam counter
FEEDER	Feeder total jam counter
SORTER	Not used
2-SIDE	Duplexing unit jam counter
MF	Multi-feeder jam counter
C1	Cassette jam counter
C2	Option cassette jam counter
C3	Not used
C4	Not used

<MISC>

T-18-69

COPIER > COUNTER > MISC	
Sub item	**Description**
WST-TNR	Not used

<DRBL-2>

T-18-70

COPIER > COUNTER > DRBL-2	
Display/setting/adjustment range: 00000000 to 99999999 When 99999999 is exceeded, the value returns to 00000000. Use this item as a guide to know the timing of replacement of consumable parts. Be sure to clear the value after the replacement of parts.	
Sub item	**Description**
DF-SP-PD	Number of times the paper goes through the ADF separation pad Display range: 0 to 50000 (Limit: 50000) [Factory setting value/Value after RAM clearing: 0]
DF-SP-RL	Number of times the paper goes through the ADF separation roller Display range: 0 to 999999 (Limit: 50000) [Factory setting value/Value after RAM clearing: 0]

18.3 FEEDER

18.3.1 ADJUST

18.3.1.1 ADJUST List

imageRUNNER C1022 / imageRUNNER C1022i

<ADJUST>

T-18-71

FEEDER > ADJUST	
Sub item	**Description**
DOCST	Adjustment of the position to stop the document when it is picked up from ADF (picked up from the document tray) Setting range: -100 to 100 For reference: When the value is increased, the margin at the lead edge is decreased.
LA-SPEED	Adjustment of the document feeding speed at DF stream reading Setting range: -512 to 512

18.3.1.2 ADJUST List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-18-72

FEEDER > ADJUST	
Sub item	**Description**
DOCST	Adjustment of the position to stop the document when it is picked up from ADF (picked up from the document tray) Setting range: -100 to 100 For reference: When the value is increased, the margin at the lead edge is decreased.
LA-SPEED	Adjustment of the document feeding speed at DF stream reading Setting range: -512 to 512

18.3.2 FUNCTION

18.3.2.1 FUNCTION List

imageRUNNER C1022 / imageRUNNER C1022i

<FUNCTION>

T-18-73

FEEDER > FUNCTION	
Sub item	**Description**
FEED-CHK	Checking of paper transport at a single ADF Setting value: 0: Single-sided, 1: Double-sided
SL-ON	Start of solenoid operation
MTR-ON	Start of motor operation
FEED-ON	Checking of paper transport at a single ADF

18.3.2.2 FUNCTION List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-18-74

FEEDER > FUNCTION	
Sub item	**Description**
FEED-CHK	Checking of paper transport at a single ADF Setting value: 0: Single-sided, 1: Double-sided
SL-ON	Start of solenoid operation
MTR-ON	Start of motor operation
FEED-ON	Checking of paper transport at a single ADF

18.4 FAX

18.4.1 SSSW

18.4.1.1 SSSW List

imageRUNNER C1022 / imageRUNNER C1022i

T-18-75

SSSW No.	Bit No.	Function
01		(Error, Copy function-related)
	0	Error code output for service engineer
02		(Network connecting condition setting-related)
	4	Forbid communication control that supports V34 CCRTN OFF IP network
	7	Connect as F-network 2-type terminal
03		(Echo-related)
	0	TCF EQM check
	1	Transmit echo protection tone to V.29
	7	Output 1080Hz before CED
04		(Communication trouble-related)
	1	Check frequency of CI signal
	2	V.21 end flag
	3	Forbid duplex waiting of T.30 node
	4	T.30 node F echo timer
	5	Check frequency of CI signal at PBX settings
	6	Do not deliver CNG at manual transmission
	7	Do not deliver CED at manual reception
05		(Standard function, DIS signal setting-related)
	1	mm/inch convert (text mode)
	2	mm/inch convert (text photo/photo mode)
	3	Forbid bit delivery after bit 33 of DIS
	4	Cut paper declaration
06		(Scanning condition settings)
	4	Scanning width 0: A4, 1: LTR
12		(Page timer settings-related) Time by 2-bit combination (0, 0): 8 min, (0, 1): 16 min, (1, 0): 32 min, (1, 1): 64min When bit 7 is 0: - 1page timeout time is specified with bit 1 and bit 0 regardless of any mode communication. When bit 7 is 1: - The timeout time for general transmission is specified with bit 1 and bit 0, for HT transmission with bit 3 and bit 2, for reception with bit 5 and bit 4
	0	1 page timeout time (transmission)
	1	
	2	1 page timeout time (HT transmission)
	3	
	4	1 page timeout time (reception)
	5	
	7	1 page timeout time
13		
	2	Convert mm/inch when sending received image
14		
	2	Whether executing inch to mm conversion in both main and sub scanning directions, or in sub scanning direction only
	4	Perform inch-type resolution declaration
15		
	2	Accept receiving ND line: Host machine line
	6	Detect continuous signal at F/T switching
18		
	0	Detect carrier disconnection between DCS and TCF
	1	Waiting time for carrier disconnection between DCS and TCF
	2	Forbid communication control for IP network
22		
	0	Forbid delivering NSX
	3	Forbid manual polling operation
25		(Report display function settings-related)
	0	Prioritize received phone number to dialed number
	2	When receiving blank CSI, regard the CSI as not-received
	3	Message language selection user SW

SSSW No.	Bit No.	Function
28		
	0	Forbid V8 procedure at calling side
	1	Forbid V8 procedure at receiving side
	2	Forbid V8 late start at calling side
	3	Forbid V8 late start at receiving side
	4	Forbid fallback start from V.34 receiving side
	5	Forbid fallback start from V.34 sending side
30		
	5	New dial tone detection method
32		
	5	0: NCU2004, 1: NCU2002
33		
	0	(Record) whether to count B4 size as large size or not
	2	(Scan) whether to count B4 size as large size or not
	5	Display toner replacement counter
35		
	0	e-RDS function (0: OFF/1: ON)

18.4.1.2 SSSW List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-18-76

SSSW No.	Bit No.	Function
01		(Error, Copy function-related)
	0	Error code output for service engineer
02		(Network connecting condition setting-related)
	4	Forbid communication control that supports V34 CCRTN OFF IP network
	7	Connect as F-network 2-type terminal
03		(Echo-related)
	0	TCF EQM check
	1	Transmit echo protection tone to V.29
	7	Output 1080Hz before CED
04		(Communication trouble-related)
	1	Check frequency of CI signal
	2	V.21 end flag
	3	Forbid duplex waiting of T.30 node
	4	T.30 node F echo timer
	5	Check frequency of CI signal at PBX settings
	6	Do not deliver CNG at manual transmission
	7	Do not deliver CED at manual reception
05		(Standard function, DIS signal setting-related)
	1	mm/inch convert (text mode)
	2	mm/inch convert (text photo/photo mode)
	3	Forbid bit delivery after bit 33 of DIS
	4	Cut paper declaration
06		(Scanning condition settings)
	4	Scanning width 0: A4, 1: LTR
12		(Page timer settings-related) Time by 2-bit combination (0, 0): 8 min, (0, 1): 16 min, (1, 0): 32 min, (1, 1): 64min When bit 7 is 0: - 1page timeout time is specified with bit 1 and bit 0 regardless of any mode communication. When bit 7 is 1: - The timeout time for general transmission is specified with bit 1 and bit 0, for HT transmission with bit 3 and bit 2, for reception with bit 5 and bit 4
	0	1 page timeout time (transmission)
	1	
	2	1 page timeout time (HT transmission)
	3	
	4	1 page timeout time (reception)
	5	
	7	1 page timeout time
13		
	2	Convert mm/inch when sending received image
14		
	2	Whether executing inch to mm conversion in both main and sub scanning directions, or in sub scanning direction only
	4	Perform inch-type resolution declaration

SSSW No.	Bit No.	Function
15		
	2	Accept receiving ND line: Host machine line
	6	Detect continuous signal at F/T switching
18		
	0	Detect carrier disconnection between DCS and TCF
	1	Waiting time for carrier disconnection between DCS and TCF
	2	Forbid communication control for IP network
22		
	0	Forbid delivering NSX
	3	Forbid manual polling operation
25		(Report display function settings-related)
	0	Prioritize received phone number to dialed number
	2	When receiving blank CSI, regard the CSI as not-received
	3	Message language selection user SW
28		
	0	Forbid V8 procedure at calling side
	1	Forbid V8 procedure at receiving side
	2	Forbid V8 late start at calling side
	3	Forbid V8 late start at receiving side
	4	Forbid fallback start from V.34 receiving side
	5	Forbid fallback start from V.34 sending side
30		
	5	New dial tone detection method
32		
	5	0: NCU2004, 1: NCU2002
33		
	0	(Record) whether to count B4 size as large size or not
	2	(Scan) whether to count B4 size as large size or not
	5	Display toner replacement counter
35		
	0	e-RDS function (0: OFF/1: ON)
	1	ON/OFF of call button function 0*: OFF/1: ON
	4	ON/OFF* of IC card authentication management function
	5	Handing of a scan job at device logout *0: Not stop a scan job 1: Stop a scan job
	6	Handling of the stop confirmation screen display when the stop key is pressed during a scan job, except remote scan *0: Display the stop confirmation screen 1: Not display the stop confirmation screen
	7	Switching to display/hide the start button of the counter print (known as billing counter report) *0: Hide the counter print button 1: Display the counter print button

18.4.2 MENU

18.4.2.1 MENU List

imageRUNNER C1022 / imageRUNNER C1022i

T-18-77

Registration mode of menu switch		
Number	**Parameter**	**Description of the selection**
05	ON/OFF of NL equalizer	0: OFF, 1: ON
06	Telephone line monitor	0: DIAL, 1: SERVICEMAN1, 2: SERVICEMAN2, 3: OFF
07	Delivery level (ATT)	0-15
08	Upper limit of V.34 modulating speed	0: 3429BAUD, 1: 3200BAUD, 2: 3000BAUD, 3: 2800BAUD, 4: 2743BAUD, 5: 2400BAUD
09	Upper limit of V. 34 data speed	(Unit: kbps) 0: 33.6, 1: 31.2, 2: 28.8, 3: 26.4, 4: 24.0, 5: 21.6, 6: 19.2, 7: 16.8, 8: 14.4, 9: 12.0, 10: 9.6, 11: 7.2, 12: 4.8, 13: 2.4
10	Frequency of pseudo CI signal	0: 50 Hz, 1: 25 Hz, 2: 17 Hz

18.4.2.2 MENU List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-18-78

Registration mode of menu switch		
Number	**Parameter**	**Description of the selection**
05	ON/OFF of NL equalizer	0: OFF, 1: ON
06	Telephone line monitor	0: DIAL, 1: SERVICEMAN1, 2: SERVICEMAN2, 3: OFF
07	Delivery level (ATT)	0-15
08	Upper limit of V.34 modulating speed	0: 3429BAUD, 1: 3200BAUD, 2: 3000BAUD, 3: 2800BAUD, 4: 2743BAUD, 5: 2400BAUD
09	Upper limit of V. 34 data speed	(Unit: kbps) 0: 33.6, 1: 31.2, 2: 28.8, 3: 26.4, 4: 24.0, 5: 21.6, 6: 19.2, 7: 16.8, 8: 14.4, 9: 12.0, 10: 9.6, 11: 7.2, 12: 4.8, 13: 2.4
10	Frequency of pseudo CI signal	0: 50 Hz, 1: 25 Hz, 2: 17 Hz

18.4.3 NUM

18.4.3.1 NUM List

imageRUNNER C1022 / imageRUNNER C1022i

T-18-79

Numeric parameter setting mode		
Number	**Parameter**	**Available setting range**
02	RTN delivery condition X	1 to 99%
03	RTN delivery condition n	2 to 99 times
04	RTN delivery condition m	1 to 99 lines
05	NCC pause time (before ID code)	1 to 60 s
06	NCC pause time (after ID code)	1 to 60 s
10	T.30 T0 timer	Generally 55s
11	T.30 T1 timer (for receiving)	0 to 9999 (France = 3500, Others = 3000)
12	Maximum number of receiving lines	0 to 65535 (lines) Unlimited for 0
13	T.30 EOL timer	500 to 3000 (Default: 55s)
15	Threshold for hooking and on-hook	0 to 999
16	Time to temporarily response at FAX/TEL switching	0 to 9
17	Pseudo RBT cadence ON time	0 to 999
18	Pseudo RBT cadence OFF time (short)	0 to 999
19	Pseudo RBT cadence OFF time (long)	0 to 999
20	Pseudo ring tone cadence ON time	0 to 999
21	Pseudo CI cadence OFF time (short)	0 to 999
22	Pseudo CI cadence OFF time (long)	0 to 999
23	CNG detection level at FAX/TEL switching	0 to 7
24	Pseudo RBT delivery level at FAX/TEL switching	10 to 20 (100V), 0 to 20 (120/ 230V)
25	CNG monitoring time when answer phone is used	0 to 999
26	Level to detect no-sound when answer phone is used	0 to 7
27	Preamble detection time of V21 low-speed flag	20 (* 10ms)
51	Threshold value of hook detection	10 to
53	Set the number of DTMF ringing times at FAX remote reception	10 to (Default: 25)
54	Set the transmission time of BusyTone when the handset is used	
55	Cycle to obtain data of environment log	0 to 480 min (Default: 60min) (No data is obtained with 0)
56	Select counter type to be displayed at counter 1	101
57	Select counter type to be displayed at counter 2	0 to 999
58	Select counter type to be displayed at counter 3	0 to 999
59	Select counter type to be displayed at counter 4	0 to 999
60	Select counter type to be displayed at counter 5	0 to 999
61	Select counter type to be displayed at counter 6	0 to 999
74	Port number of e-RDS RGW	
75	Transmission interval of e-RDS for 3rd party	

18.4.3.2 NUM List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-18-80

Numeric parameter setting mode		
Number	**Parameter**	**Available setting range**
02	RTN delivery condition X	1 to 99%
03	RTN delivery condition n	2 to 99 times
04	RTN delivery condition m	1 to 99 lines

Numeric parameter setting mode		
Number	**Parameter**	**Available setting range**
05	NCC pause time (before ID code)	1 to 60 s
06	NCC pause time (after ID code)	1 to 60 s
10	T.30 T0 timer	Generally 55s
11	T.30 T1 timer (for receiving)	0 to 9999 (France = 3500, Others = 3000)
12	Maximum number of receiving lines	0 to 65535 (lines) Unlimited for 0
13	T.30 EOL timer	500 to 3000 (Default: 55s)
15	Threshold for hooking and on-hook	0 to 999
16	Time to temporarily response at FAX/TEL switching	0 to 9
17	Pseudo RBT cadence ON time	0 to 999
18	Pseudo RBT cadence OFF time (short)	0 to 999
19	Pseudo RBT cadence OFF time (long)	0 to 999
20	Pseudo ring tone cadence ON time	0 to 999
21	Pseudo CI cadence OFF time (short)	0 to 999
22	Pseudo CI cadence OFF time (long)	0 to 999
23	CNG detection level at FAX/TEL switching	0 to 7
24	Pseudo RBT delivery level at FAX/TEL switching	10 to 20 (100V), 0 to 20 (120/ 230V)
25	CNG monitoring time when answer phone is used	0 to 999
26	Level to detect no-sound when answer phone is used	0 to 7
27	Preamble detection time of V21 low-speed flag	20 (* 10ms)
51	Threshold value of hook detection	10 to
53	Set the number of DTMF ringing times at FAX remote reception	10 to (Default: 25)
54	Set the transmission time of BusyTone when the handset is used	
55	Cycle to obtain data of environment log	0 to 480 min (Default: 60min) (No data is obtained with 0)
56	Select counter type to be displayed at counter 1	101
57	Select counter type to be displayed at counter 2	0 to 999
58	Select counter type to be displayed at counter 3	0 to 999
59	Select counter type to be displayed at counter 4	0 to 999
60	Select counter type to be displayed at counter 5	0 to 999
61	Select counter type to be displayed at counter 6	0 to 999
74	Port number of e-RDS RGW	
75	Transmission interval of e-RDS for 3rd party	

18.4.4 NCU

18.4.4.1 NCU List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<TONE>

T-18-81

FAX > NCU > TONE		
BIT	**Function**	**Setting range**
1	Tone signal sending time (PSTN)	10 to 9999 (ms)
2	Minimum pause time (PSTN)	10 to 9999 (ms)

<PULSE>

T-18-82

FAX > NCU > PULSE			
Item	**BIT**	**Function**	**Setting range**
PULSE FORM		Pulse digit format	0 -> DP (N) 1 -> DP (N+1) 2 -> DP (10-N)
PULSE NUM	1	Pulse dial speed (10pps)	5 to 300 (x 0.1pps)
	3	Pulse dial make ratio	10 to 90 (%)
	4	Minimum pause time	10 to 9999 (ms)

<DIAL TONE>
(1)Bit switch

T-18-83

FAX > NCU > DIAL TONE		
BIT	**Function**	**Setting range**
0	Frequency detection method	0: Tonal counter 1: Modem
1		
2	Signal frequency	0: Not change 1: Change

FAX > NCU > DIAL TONE		
BIT	**Function**	**Setting range**
3		
4	Judgment of intermittent signal	0: Start from either valid ON signal or OFF signal 1: Start from valid ON signal
5		
6	Signal formation	0: Intermittent 1: Continuous
7	Signal detection	0: Not detect 1: Detect

(2)Numeric value parameter

T-18-84

FAX > NCU > DIAL TONE		
Parameter No.	**Function**	**Setting range**
01	T0 timer	0-9999(x10ms)
02	T1 timer	0-9999(x10ms)
03	T2 timer	0-9999(x10ms)
04	T3 timer	0-9999(x10ms)
05	T4 timer	0-9999(x10ms)
06	Signal detection table	0-16
07	Signal detection level	0-7
08	Number of valid DT (DIAL TONE) detection	0-9999(Times)

<2nd DIAL TONE>
(1)Bit switch

T-18-85

FAX > NCU > 2nd DIAL TONE		
BIT	**Function**	**Setting range**
0	Frequency detection method	0: Tonal counter 1: Modem
1		
2	Signal frequency	0: Not change 1: Change
3		
4	Judgment of intermittent signal	0: Start from either valid ON signal or OFF signal 1: Start from valid ON signal
5		
6	Signal formation	0: Intermittent 1: Continuous
7	Signal detection	0: Not detect 1: Detect

(2)Numeric value parameter

T-18-86

FAX > NCU > 2nd DIAL TONE		
Parameter No.	**Function**	**Setting range**
1	T0 timer	0-9999(x10ms)
2	T1 timer	0-9999(x10ms)
3	T2 timer	0-9999(x10ms)
4	T3 timer	0-9999(x10ms)
5	T4 timer	0-9999(x10ms)
6	Signal detection table	0-16
7	Signal detection level	0-7
8	Number of valid DT (DIAL TONE) detection	0-9999(Times)

<BUSY TONE 0>
(1)Bit switch

T-18-87

FAX > NCU > BUSY TONE 0		
BIT	**Function**	**Setting range**
0		
1		
2	Signal frequency	0: Not change 1: Change
3		
4	Judgment of intermittent signal	0: Start from either valid ON signal or OFF signal 1: Start from valid ON signal

FAX > NCU > BUSY TONE 0		
BIT	**Function**	**Setting range**
5		
6	Signal formation	0: Intermittent 1: Continuous
7	Signal detection	0: Not detect 1: Detect

(2)Numeric value parameter

T-18-88

FAX > NCU > 2nd DIAL TONE		
Parameter No.	**Function**	**Setting range**
01		
02	T1 timer	0-9999(x10ms)
03	T2 timer	0-9999(x10ms)
04	T3 timer	0-9999(x10ms)
05	T4 timer	0-9999(x10ms)
06	Signal detection table	0-16
07	Signal detection level	0-7
08	Number of valid DT (DIAL TONE) detection	0-9999(Times)

<BUSY TONE 1>
(1)Bit switch

T-18-89

FAX > NCU > BUSY TONE 1		
BIT	**Function**	**Setting range**
0		
1		
2	Signal frequency	0: Not change 1: Change
3	RBT signal detection	0: Not detect 1: Detect
4	Judgment of intermittent signal	0:Start from either valid ON signal or OFF signal 1:Start from valid ON signal
5	RBT signal check cycle	0: 1/2 cycle 1: 1 cycle
6	Signal formation	0: Intermittent 1: Continuous
7	Signal detection	0: Not detect 1: Detect

(2)Numeric value parameter

T-18-90

FAX > NCU > BUSY TONE 1		
Parameter No.	**Function**	**Setting range**
1		
2	T1 timer	0-9999(x10ms)
3	T2 timer	0-9999(x10ms)
4	T3 timer	0-9999(x10ms)
5	T4 timer	0-9999(x10ms)
6	Signal detection table	0-16
7	Signal detection level	0-7
8	Number of valid DT (DIAL TONE) detection	0-9999(Times)

<REORDER TONE>
(1)Bit switch

T-18-91

FAX > NCU > REORDER TONE		
BIT	**Function**	**Setting range**
0		
1	Signal detection method	0: FR3 1: FED
2	Signal frequency	0: Not change 1: Change
3		
4	Judgment of intermittent signal	0:Start from either valid ON signal or OFF signal 1:Start from valid ON signal
5		

FAX > NCU > REORDER TONE		
BIT	**Function**	**Setting range**
6	Signal formation	0: Intermittent 1: Continuous
7	Signal detection	0: Not detect 1: Detect

(2)Numeric value parameter

T-18-92

FAX > NCU > REORDER TONE		
Parameter No.	**Function**	**Setting range**
01		
02	T1 timer	0-9999(x10ms)
03	T2 timer	0-9999(x10ms)
04	T3 timer	0-9999(x10ms)
05	T4 timer	0-9999(x10ms)
06	Signal detection table	0-16
07	Signal detection level	0-7
08	Number of valid DT (DIAL TONE) detection	0-9999(Times)

<MULTI>
(1)Numeric value parameter

T-18-93

FAX > NCU > MULTI		
Parameter No.	**Function**	**Setting range**
01-04	Not used	

<AUTO RX>
(1)Numeric value parameter

T-18-94

FAX > NCU > AUTO RX		
Parameter No.	**Function**	**Setting range**
01	CI ON time	0-9999(x10ms)
02	CI LONG ON time	0-9999(x10ms)
03	CI OFF time	0-9999(x10ms)
04	CI LONG OFF time	0-9999(x10ms)
05	CI MAX OFF time	0-9999(x10ms)
06	CI WAIT time	0-9999(x10ms)
07	CI frequency	0-9999(cycle)
08	CI frequency lower limit	0-9999(Hz)
09	CI frequency upper limit	0-9999(Hz)

<CNG DETECT>
(1)Numeric value parameter

T-18-95

FAX > NCU > CNG DETECT			
Parameter No.	**Setting description**		**Setting range**
1	At F/T switching	CNG MIN ON time	0-9999(x10ms)
2		CNG MAX ON time	0-9999(x10ms)
6		Hit ratio	0-9999(%)
7	At direct connecting to answering phone	CNG MIN ON time	0-9999(x10ms)
8		CNG MAX ON time	0-9999(x10ms)
9		Permissible time of instantaneous interruption	0-9999(x10ms)
11		Number of detection	0-9999(time)
12		Hit ratio	0-9999(%)

<RKEY>
(1)Numeric value parameter

T-18-96

FAX > NCU > RKEY		
Parameter No.	**Function**	**Setting range**
01	Connection time of flash	0-9999(x10ms)
02	Grounding time of grounding wire	0-9999(x10ms)
03		

<PBX DIAL TONE>
(1)Bit switch

T-18-97

FAX > NCU > PBX DIAL TONE		
BIT	**Function**	**Setting range**
0	Frequency detection method	0: Tonal counter 1: Modem
1		
2	Signal frequency	0: Not change 1: Change
3		
4	Judgment of intermittent signal	0: Start from either valid ON signal or OFF signal 1: Start from valid ON signal
5		
6	Signal formation	0: Intermittent 1: Continuous
7	Signal detection	0: Not detect 1: Detect

(2)Numeric value parameter

T-18-98

FAX > NCU > PBX DIAL TONE		
Parameter No.	**Function**	**Setting range**
1	T0 timer	0-9999(x10ms)
2	T1 timer	0-9999(x10ms)
3	T2 timer	0-9999(x10ms)
4	T3 timer	0-9999(x10ms)
5	T4 timer	0-9999(x10ms)
6	Signal detection table	0-16
7	Signal detection level	0-9
8	Number of valid DT (DIAL TONE) detection	0-9999(Times)

<PBX BUSY TONE>
(1)Bit switch

T-18-99

FAX > NCU > PBX BUSY TONE		
BIT	**Function**	**Setting range**
0		
1		
2	Signal frequency	0: Not change 1: Change
3		
4	Judgment of intermittent signal	0: Start from either valid ON signal or OFF signal 1: Start from valid ON signal
5		
6	Signal formation	0: Intermittent 1: Continuous
7	Signal detection	0: Not detect 1: Detect

(2)Numeric value parameter

T-18-100

FAX > NCU > PBX BUSY TONE		
Parameter No.	**Function**	**Setting range**
1		
2	T1 timer	0-9999(x10ms)
3	T2 timer	0-9999(x10ms)
4	T3 timer	0-9999(x10ms)
5	T4 timer	0-9999(x10ms)
6	Signal detection table	0-16
7	Signal detection level	0-9
8	Number of valid DT (DIAL TONE) detection	0-9999(Times)

18.5 TESTMODE

18.5.1 SYSTEM

18.5.1.1 SYSTEM List

imageRUNNER C1022 / imageRUNNER C1022i

<DRAM>

T-18-101

TESTMODE > SYSTEM > DRAM	
Check DRAM	
Sub item	**Description**
TEST1	Check writing/reading of data in DRAM area (excluding system work area)
TEST2	Check data reading (high speed)

<ACC>

T-18-102

TESTMODE > SYSTEM > ACC	
Check ID control card reader	
Sub item	**Description**
NCR-CRD	Display: presence/absence of NCR device or the card
CRD-KIND	Card type (the first 3-digit characters)
CRD-STYL	Card format (the second 3-digit characters)
READ-STS	Read status (the third 3/2-digit characters)
NCR-STS	Device status (the fourth character)
NCR-VER	Version of NCR device (4-digit numeric figures)

<SPEAKER>

T-18-103

TESTMODE > SYSTEM > SPEAKER	
Check SPEAKER	
Sub item	**Description**
ON	When "ON" is selected, increase the volume step by step from the minimum up to maximum whenever OK key is pressed. When reaching the maximum volume, it goes back to the minimum volume through silent state.
MIN	When "MIN" is selected, set off the minimum volume with OK key.
MAX	When "MAX" is selected, set off the maximum volume with OK key.
VOL	Set off the volume according to the hardware volume.

18.5.1.2 SYSTEM List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<DRAM>

T-18-104

TESTMODE > SYSTEM > DRAM	
Check DRAM	
Sub item	**Description**
TEST1	Check writing/reading of data in DRAM area (excluding system work area)
TEST2	Check data reading (high speed)

<ACC>

T-18-105

TESTMODE > SYSTEM > ACC	
Check ID control card reader	
Sub item	**Description**
NCR-CRD	Display: presence/absence of NCR device or the card
CRD-KIND	Card type (the first 3-digit characters)
CRD-STYL	Card format (the second 3-digit characters)
READ-STS	Read status (the third 3/2-digit characters)
NCR-STS	Device status (the fourth character)
NCR-VER	Version of NCR device (4-digit numeric figures)

<SPEAKER>

T-18-106

TESTMODE > SYSTEM > SPEAKER	
Check SPEAKER	
Sub item	**Description**
ON	When "ON" is selected, increase the volume step by step from the minimum up to maximum whenever OK key is pressed. When reaching the maximum volume, it goes back to the minimum volume through silent state.
MIN	When "MIN" is selected, set off the minimum volume with OK key.
MAX	When "MAX" is selected, set off the maximum volume with OK key.
VOL	Set off the volume according to the hardware volume.

18.5.2 SCAN

18.5.2.1 SCAN List

imageRUNNER C1022 / imageRUNNER C1022i

<ADJUST>

T-18-107

TESTMODE > SCAN > ADJUST	
Sub item	**Description**
WLVL-ADJ	Correct white level in copyboard scanning and stream scanning to determine shading target.
SCAN READ	Start copyboard scanning operation to read white level of the document (original).
FLOW SCAN READ	Start stream scanning operation to read white level at stream scanning.
KDT-DF1-R	Display DT-DF1-R
KDT-DF1-G	Display DT-DF1-G
KDT-DF1-B	Display DT-DF1-B
KDT-DF2-R	Display DT-DF2-R
KDT-DF2-G	Display DT-DF2-G
KDT-DF2-B	Display DT-DF2-B
ADF-ADJ	Execute adjustment of ADF
DF-STRM	Not used
DF-SPEED	Not used
DF-OFFST	Not used
DF-POSAD	Not used

<SENSOR>

T-18-108

TESTMODE > SCAN > ADJUST	
Checking Sensor	
Sub item	**Description**
HP-SENS	Home position sensor 1: HP, 0: anything other than HP
TP-SENS	Sensor for paper in tray 1: presence of paper, 0: no paper
REG-SENS	Pre-registration sensor 1: presence of paper, 0: no paper
ESS-SENS	Front door sensor 1: ON, 0: OFF

<ADFTEST>

T-18-109

TESTMODE > SCAN > ADFTEST	
ADF Feeding Test **Execute feeding operation according to the scanning feeding speed (specified in SPEED, 2-SIDE, COUNT)**	
Sub item	**Description**
SPEED	Not used
2-SIDE	Select ON/OFF for duplex mode
COUNT	Not used
START	Start feeding

<BOOKFEED>

T-18-110

TESTMODE > SCAN > BOOKFEED	
Testing Book Feed Operation	
Sub item	**Description**
PAGE	Display the number of pages that had been book-fed
START	Start book feeding

18.5.2.2 SCAN List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<ADJUST>

T-18-111

TESTMODE > SCAN > ADJUST	
Sub item	**Description**
WLVL-ADJ	Correct white level in copyboard scanning and stream scanning to determine shading target.

TESTMODE > SCAN > ADJUST	
Sub item	**Description**
SCAN READ	Start copyboard scanning operation to read white level of the document (original).
FLOW SCAN READ	Start stream scanning operation to read white level at stream scanning.
KDT-DF1-R	Display DT-DF1-R
KDT-DF1-G	Display DT-DF1-G
KDT-DF1-B	Display DT-DF1-B
KDT-DF2-R	Display DT-DF2-R
KDT-DF2-G	Display DT-DF2-G
KDT-DF2-B	Display DT-DF2-B
ADF-ADJ	Execute adjustment of ADF
DF-STRM	Not used
DF-SPEED	Not used
DF-OFFST	Not used
DF-POSAD	Not used

<SENSOR>

T-18-112

TESTMODE > SCAN > ADJUST	
Checking Sensor	
Sub item	**Description**
HP-SENS	Home position sensor 1: HP, 0: anything other than HP
TP-SENS	Sensor for paper in tray 1: presence of paper, 0: no paper
REG-SENS	Pre-registration sensor 1: presence of paper, 0: no paper
ESS-SENS	Front door sensor 1: ON, 0: OFF

<ADFTEST>

T-18-113

TESTMODE > SCAN > ADFTEST	
ADF Feeding Test **Execute feeding operation according to the scanning feeding speed (specified in SPEED, 2-SIDE, COUNT)**	
Sub item	**Description**
SPEED	Not used
2-SIDE	Select ON/OFF for duplex mode
COUNT	Not used
START	Start feeding

<BOOKFEED>

T-18-114

TESTMODE > SCAN > BOOKFEED	
Testing Book Feed Operation	
Sub item	**Description**
PAGE	Display the number of pages that had been book-fed
START	Start book feeding

18.5.3 PRINT

18.5.3.1 PRINT List

imageRUNNER C1022 / imageRUNNER C1022i

<PRINT>

T-18-115

TESTMODE > PRINT	
Printing PG pattern	
Sub item	**Description**
PG-TYPE	Enter PG number
COUNT	Enter the number to be output
PHASE	Select 1-sided/2-sided
MODE	Not used
THRU	Not used
DENS-M	Not used
DENS-C	Not used
DENS-Y	Not used

TESTMODE > PRINT	
Printing PG pattern	
Sub item	**Description**
DENS-K	Not used
COLOR-M	Selection for each color is available The selected color (ON) is to be output. Setting value: 1: ON, 0: OFF
COLOR-Y	Selection for each color is available The selected color (ON) is to be output. Setting value: 1: ON, 0: OFF
COLOR-C	Selection for each color is available The selected color (ON) is to be output. Setting value: 1: ON, 0: OFF
COLOR-K	Selection for each color is available The selected color (ON) is to be output. Setting value: 1: ON, 0: OFF
SIZE	Display paper size
PAPER	Display presence/absence of paper
MATERIAL	Display paper type
FACE UP DOWN	Not used
FEED	Selection for the pickup position
START	Start PG pattern print Execute output that has been selected above by pressing it.

18.5.3.2 PRINT List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<PRINT>

T-18-116

TESTMODE > PRINT	
Printing PG pattern	
Sub item	**Description**
PG-TYPE	Enter PG number
COUNT	Enter the number to be output
PHASE	Select 1-sided/2-sided
MODE	Not used
THRU	Not used
DENS-M	Not used
DENS-C	Not used
DENS-Y	Not used
DENS-K	Not used
COLOR-M	Selection for each color is available The selected color (ON) is to be output. Setting value: 1: ON, 0: OFF
COLOR-Y	Selection for each color is available The selected color (ON) is to be output. Setting value: 1: ON, 0: OFF
COLOR-C	Selection for each color is available The selected color (ON) is to be output. Setting value: 1: ON, 0: OFF
COLOR-K	Selection for each color is available The selected color (ON) is to be output. Setting value: 1: ON, 0: OFF
SIZE	Display paper size
PAPER	Display presence/absence of paper
MATERIAL	Display paper type
FACE UP DOWN	Not used
FEED	Selection for the pickup position
START	Start PG pattern print Execute output that has been selected above by pressing it.

18.5.4 FAX

18.5.4.1 FAX List

imageRUNNER C1022 / imageRUNNER C1022i

<MODEM>

T-18-117

TESTMODE > FAX > MODEM		
Sub item		**Description**
RELAY-1	**CML**	Test ON/OFF state of NCU's each relay and port SW
	P	
	S	
	H	
	D	
	R	
RELAY-2	**CI2**	Test ON/OFF state of NCU's each relay and port SW
	C1	
	NOR	
	DCSEL	
	DCLIN	
	IPSEL1	
FREQ	**462Hz**	Close DC circuit to deliver the selected frequency using the modem's tone delivery function.
	1100Hz	
	1300Hz	
	1500Hz	
	1650Hz	
	1850Hz	
	2100Hz	
G3TX	**300bps**	Close DC circuit to deliver the selected signal pattern with the selected frequency using the modem's G3 signal delivery function.
	2400bps	
	4800bps	
	7200bps	
	9800bps	
	TC7200	
	TC9600	
	12000bp	
	14400bp	
DTMFTX (LONG)		Close DC circuit to deliver DTMF signal using the modem's DTMF delivery function.
V34G3TX	**SPEED**	Close DC circuit to deliver the selected frequency using the modem's G3 signal delivery function (V. 34)
	3429baud	
	3200baud	
	3000baud	
	2800baud	
	2743baud	
	2400baud	

<FACULTY>

T-18-118

TESTMODE > FAX > FACULTY		
Sub item		**Description**
G34800TX	**G34 800TX**	Close DC circuit to deliver the frequency of 4800bps using the modem's G3 signal delivery function.
DETECT1	**CI**	Ring detection Check Ci, Fc and hook state (ON, OFF) from l-line.
	CI FREQ	
	HOOK	
	FC	
DETECT2	**CMG**	CNG detection test 1 Check CNG signal and FED Make CML relay at ON state to detect CNG
	FED	
	CML	
DETECT3	**CMG**	CNG detection test 2 Check CNG signal and FED Make CML relay at OFF state to detect CNG
	FED	
	CML	

18.5.4.2 FAX List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<MODEM>

T-18-119

TESTMODE > FAX > MODEM		
Sub item		**Description**
RELAY-1	**CML**	Test ON/OFF state of NCU's each relay and port SW
	P	
	S	
	H	
	D	
	R	
RELAY-2	**CI2**	Test ON/OFF state of NCU's each relay and port SW
	C1	
	NOR	
	DCSEL	
	DCLIN	
	IPSEL1	
FREQ	**462Hz**	Close DC circuit to deliver the selected frequency using the modem's tone delivery function.
	1100Hz	
	1300Hz	
	1500Hz	
	1650Hz	
	1850Hz	
	2100Hz	
G3TX	**300bps**	Close DC circuit to deliver the selected signal pattern with the selected frequency using the modem's G3 signal delivery function.
	2400bps	
	4800bps	
	7200bps	
	9800bps	
	TC7200	
	TC9600	
	12000bp	
	14400bp	
DTMFTX (LONG)		Close DC circuit to deliver DTMF signal using the modem's DTMF delivery function.
V34G3TX	**SPEED**	Close DC circuit to deliver the selected frequency using the modem's G3 signal delivery function (V. 34)
	3429baud	
	3200baud	
	3000baud	
	2800baud	
	2743baud	
	2400baud	

<FACULTY>

T-18-120

TESTMODE > FAX > FACULTY		
Sub item		**Description**
G34800TX	**G34 800TX**	Close DC circuit to deliver the frequency of 4800bps using the modem's G3 signal delivery function.
DETECT1	**CI**	Ring detection Check Ci, Fc and hook state (ON, OFF) from l-line.
	CI FREQ	
	HOOK	
	FC	
DETECT2	**CMG**	CNG detection test 1 Check CNG signal and FED Make CML relay at ON state to detect CNG
	FED	
	CML	
DETECT3	**CMG**	CNG detection test 2 Check CNG signal and FED Make CML relay at OFF state to detect CNG
	FED	
	CML	

18.5.5 PANEL

18.5.5.1 PANEL List

imageRUNNER C1022 / imageRUNNER C1022i

<PANEL>

T-18-121

TESTMODE > PANEL	
Key, wheel, LCD, LED, and flicker check	
Sub item	**Description**
KEY CHECK START	Key check Check the operation of the key on the control panel. The following table shows information displayed when pressing each key. When pressing the OK key after operation check, OK or NG is displayed in the following condition. OK: Operation was correctly performed for all keys. NG: A failure occurred to key operation. (Clicking the ► key displays the keys which have not been pressed sequentially.)

T-18-122

Type of Key	Character String Displayed
Main Menu key	MAIN
Custom key 1	COPY
Custom key 2	SEND
Status monitor/Cancel key	JOB
Left any key	MENU-L
Right any key	MENU-R
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
*	*
0	0
#	#
Log in/out key	ID
Clear key	C
Back key	RETURN
◄ key	LEFT
▲ key	UP
► key	RIGHT
▼ key	DOWN
Reset key	RESET
Start key	START
Stop key	STOP
OK key	(Key check is completed.)

T-18-123

TESTMODE > PANEL	
Key, wheel, LCD, LED, and flicker check	
Sub item	**Description**
WHEEL CHECK START	Wheel check Check the operation of the wheel. Turning the wheel clockwise increases the value, and turning it counterclockwise decreases the value. (Values are displayed in the range from 0 to 23.) When pressing the OK key after operation check, OK or NG is displayed in the following condition. OK: Entry was made with more than 12 consecutive clicks counterclockwise, and with more than 12 consecutive clicks counterclockwise. (Refer to MEMO.) NG: Requirements for displaying OK are not satisfied. (The OK key was pressed with clockwise or counterclockwise operation only.) MEMO: - 1 click increases/decreases the value by 1. - The wheel rotates 360 degrees with 24 clicks.
LED CHECK START	LED check Check the LED operation. Every time pressing the OK key after LEDs are completely turned off, the Start Key Lamp --> Execution/Memory Lamp --> Error Lamp light up sequentially. When pressing the Return key in midstream, LED check stops and NG is displayed. MEMO: The main power lamp lights up constantly.
LCD CHECK START	LCD check Check the LCD operation. Every time pressing the OK key, colors are displayed on the entire LCD in the order of black-->white-->red-->green-->blue. When LED check is completed, OK is displayed. When pressing the Return key in midstream, LCD check stops and NG is displayed.

TESTMODE > PANEL	
Key, wheel, LCD, LED, and flicker check	
Sub item	**Description**
FLICKER CHECK START	Flicker check Adjust and check the LCD flicker. Adjustment can be made by changing the setting value. Perform operation in the order of "FLICKER ADJUST -> FLICEKR MIN/MAX -> FLICKER CONFIRM".
FLICKER ADJUST	Adjust the setting value. [Adjustment method] 1) Press the OK key. 2) In the setting value entry screen displayed, press the OK key again. 3) Increase or decrease the setting value to minimize flicker in the flicker screen displayed. (◄ key: The value decreases. ► key: The value increases.) 4) When pressing the OK key, the setting value is displayed in the setting value input screen. 5) Press the Return key and complete adjustment. Setting range: 0 to 33 [Factory setting value: Varies depending on the machine] [Value after clearing of RAM data: 15] MEMO: A setting value can be entered in the setting value entry screen, using numeric keys. However, to reflect the setting value, it is necessary to display the flicker screen once after the value is entered.
FLICKER MIN/MAX	Specify the minimum/maximum setting value to make an adjustment. MEMO: After setting is completed, the setting value which was displayed in FLICKER ADJUST is changed to the average value of MIN and MAX.
MIN	Set the minimum setting value. [Adjustment method] 1) Press the OK key. 2) Increase/decrease the setting value to minimize flicker in the flicker screen displayed. (◄ key: The value decreases. ► key: The value increases.) 3) When pressing the OK key, the setting value is displayed. 4) Press the Return key and complete adjustment. [Factory setting value: Varies depending on the machine] [Value after clearing of RAM data: 10]
MAX	Set the maximum setting value. [Adjustment method] 1) Press the OK key. 2) Increase/decrease the setting value to minimize flicker in the flicker screen displayed. (◄ key: The value decreases. ► key: The value increases.) 3) When pressing the OK key, the setting value is displayed. 4) Press the Return key and complete adjustment. [Factory setting value: Varies depending on the machine] [Value after clearing of RAM data: 20]
FLICKER CONFIRM	Check the setting. [Adjustment method] 1) Press the OK key. 2) In the setting value entry screen displayed, press the OK key again. 3) When pressing the OK key after checking the flicker screen, the setting value entry screen is displayed. 4) Press the Return key and complete checking. Setting range: 0 to 255 [Factory setting value: Varies depending on the machine] [Value after clearing of RAM data: 200]

18.5.5.2 PANEL List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

<PANEL>

T-18-124

TESTMODE > PANEL	
Key, wheel, LCD, LED, and flicker check	
Sub item	**Description**
KEY CHECK START	Key check Check the operation of the key on the control panel. The following table shows information displayed when pressing each key. When pressing the OK key after operation check, OK or NG is displayed in the following condition. OK: Operation was correctly performed for all keys. NG: A failure occurred to key operation. (Clicking the ► key displays the keys which have not been pressed sequentially.)

T-18-125

Type of Key	Character String Displayed
Main Menu key	MAIN
Custom key 1	COPY
Custom key 2	SEND
Status monitor/Cancel key	JOB
Left any key	MENU-L
Right any key	MENU-R

Type of Key	Character String Displayed
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
*	*
0	0
#	#
Log in/out key	ID
Clear key	C
Back key	RETURN
◀ key	LEFT
▲ key	UP
▶ key	RIGHT
▼ key	DOWN
Reset key	RESET
Start key	START
Stop key	STOP
OK key	(Key check is completed.)

T-18-126

TESTMODE > PANEL	
Key, wheel, LCD, LED, and flicker check	
Sub item	**Description**
WHEEL CHECK START	Wheel check Check the operation of the wheel. Turning the wheel clockwise increases the value, and turning it counterclockwise decreases the value. (Values are displayed in the range from 0 to 23.) When pressing the OK key after operation check, OK or NG is displayed in the following condition. OK: Entry was made with more than 12 consecutive clicks counterclockwise, and with more than 12 consecutive clicks counterclockwise. (Refer to MEMO.) NG: Requirements for displaying OK are not satisfied. (The OK key was pressed with clockwise or counterclockwise operation only.) MEMO: - 1 click increases/decreases the value by 1. - The wheel rotates 360 degrees with 24 clicks.
LED CHECK START	LED check Check the LED operation. Every time pressing the OK key after LEDs are completely turned off, the Start Key Lamp --> Execution/Memory Lamp --> Error Lamp light up sequentially. When pressing the Return key in midstream, LED check stops and NG is displayed. MEMO: The main power lamp lights up constantly.
LCD CHECK START	LCD check Check the LCD operation. Every time pressing the OK key, colors are displayed on the entire LCD in the order of black-->white-->red-->green-->blue. When LED check is completed, OK is displayed. When pressing the Return key in midstream, LCD check stops and NG is displayed.
FLICKER CHECK START	Flicker check Adjust and check the LCD flicker. Adjustment can be made by changing the setting value. Perform operation in the order of "FLICKER ADJUST -> FLICEKR MIN/MAX -> FLICKER CONFIRM".

TESTMODE > PANEL	
Key, wheel, LCD, LED, and flicker check	
Sub item	**Description**
FLICKER ADJUST	Adjust the setting value. [Adjustment method] 1) Press the OK key. 2) In the setting value entry screen displayed, press the OK key again. 3) Increase or decrease the setting value to minimize flicker in the flicker screen displayed. (◄ key: The value decreases. ► key: The value increases.) 4) When pressing the OK key, the setting value is displayed in the setting value input screen. 5) Press the Return key and complete adjustment. Setting range: 0 to 33 [Factory setting value: Varies depending on the machine] [Value after clearing of RAM data: 15] MEMO: A setting value can be entered in the setting value entry screen, using numeric keys. However, to reflect the setting value, it is necessary to display the flicker screen once after the value is entered.
FLICKER MIN/MAX	Specify the minimum/maximum setting value to make an adjustment. MEMO: After setting is completed, the setting value which was displayed in FLICKER ADJUST is changed to the average value of MIN and MAX.
MIN	Set the minimum setting value. [Adjustment method] 1) Press the OK key. 2) Increase/decrease the setting value to minimize flicker in the flicker screen displayed. (◄ key: The value decreases. ► key: The value increases.) 3) When pressing the OK key, the setting value is displayed. 4) Press the Return key and complete adjustment. [Factory setting value: Varies depending on the machine] [Value after clearing of RAM data: 10]
MAX	Set the maximum setting value. [Adjustment method] 1) Press the OK key. 2) Increase/decrease the setting value to minimize flicker in the flicker screen displayed. (◄ key: The value decreases. ► key: The value increases.) 3) When pressing the OK key, the setting value is displayed. 4) Press the Return key and complete adjustment. [Factory setting value: Varies depending on the machine] [Value after clearing of RAM data: 20]
FLICKER CONFIRM	Check the setting. [Adjustment method] 1) Press the OK key. 2) In the setting value entry screen displayed, press the OK key again. 3) When pressing the OK key after checking the flicker screen, the setting value entry screen is displayed. 4) Press the Return key and complete checking. Setting range: 0 to 255 [Factory setting value: Varies depending on the machine] [Value after clearing of RAM data: 200]

Chapter 19 Upgrading

Contents

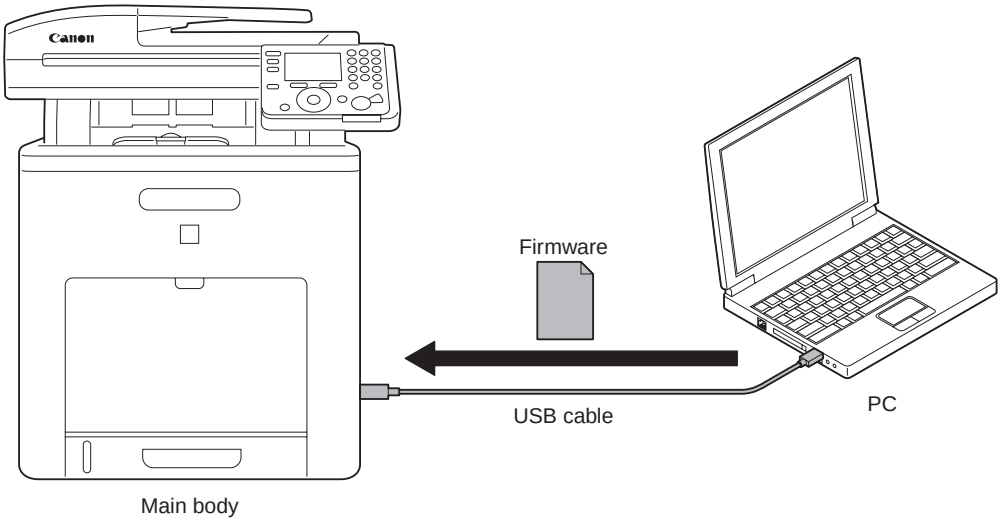
19.1 Outline....19-1
19.1.1 Overview of Upgrade....19-1
19.2 Making Preparations....19-2
19.2.1 Required System Environment....19-2
19.2.2 Before Upgrade....19-2
19.3 Downloading System Software....19-3
19.3.1 Downloading the System Software....19-3
19.3.1.1 Downloading Procedure....19-3
19.3.1.2 Downloading Procedure....19-7

19.1 Outline

19.1.1 Overview of Upgrade

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

To upgrade this machine, download the firmware from PC to the machine with using the user support tool (hereinafter called UST).



F-19-1

Firmware Structure

T-19-1

Firmware	Function	Storage
BOOTROM	Main controller activation	Main controller PCB
BOOTABLE	Whole control	Main controller PCB
LANGUAGE	Language file	Main controller PCB
DCON	Control printer area	DC controller PCB

Depending on the UST version, Firmware can be less than above mentioned.

19.2 Making Preparations

19.2.1 Required System Environment

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

- OS (any of the following)
  - Microsoft Windows 2000 Server/Professional
  - Microsoft Windows XP Professional/Home Edition *
  - Microsoft Windows Server 2003 *
  - Microsoft Windows Vista *

  *: 32-bit processor version only

- PC
  - PC that supports the foregoing OS
  - Memory (RAM): 32 MB or more
  - Hard disk; 100 MB or more
  - Display: resolution 640x480 pixel or better, 256 color or more
  - PC that has USB port

- UST file for the Machine *

  *: Obtained from System CD and Service site's download. (Vary depends on the sales company).

- USB cable (USB1.1/2.0)

19.2.2 Before Upgrade

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

Remove all the connected cable (except for the power cord) from the machine, before upgrade.
Communication during upgrade operation may trigger errors.

1) Start PC.
2) Connect the machine and a PC with a USB cable.
3) Turn ON the machine and enter the download mode in service mode.
   COPIER> FUNCTION> SYSTEM> DOWNLOAD
   [USB DOWNLOAD AVAILABLE] is displayed on the control panel.

F-19-2

MEMO:
Click "Cancel" when [Found New Hardware Wizard] is displayed on PC screen.

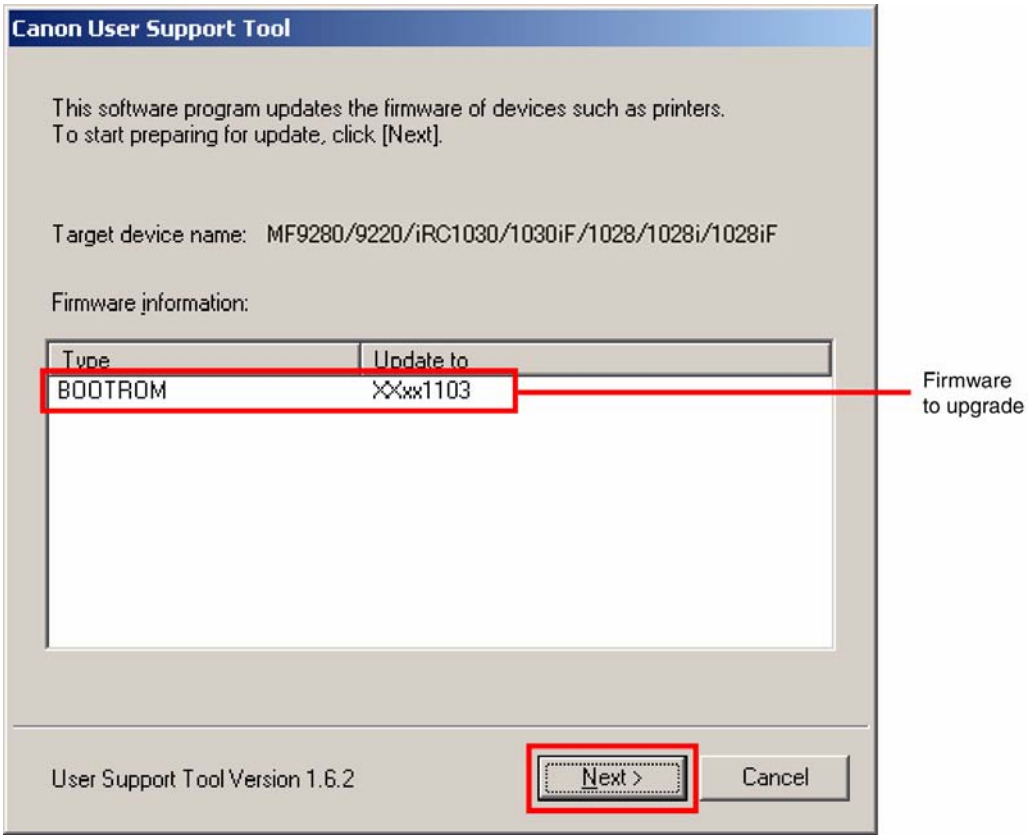
19.3 Downloading System Software

19.3.1 Downloading the System Software

19.3.1.1 Downloading Procedure

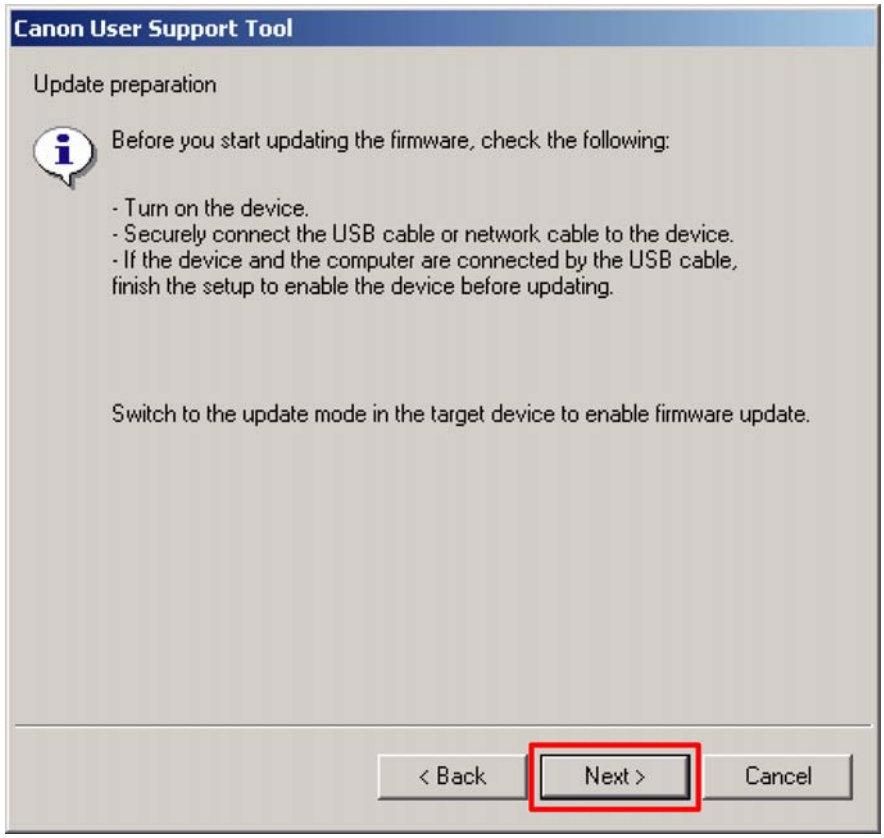
imageRUNNER C1022 / imageRUNNER C1022i

1) Open the UST (wlaaXXXX-ust-all.exe).
   XXXX: firmware version
2) Note the firmware version that the current one will be updated to and click "Next".



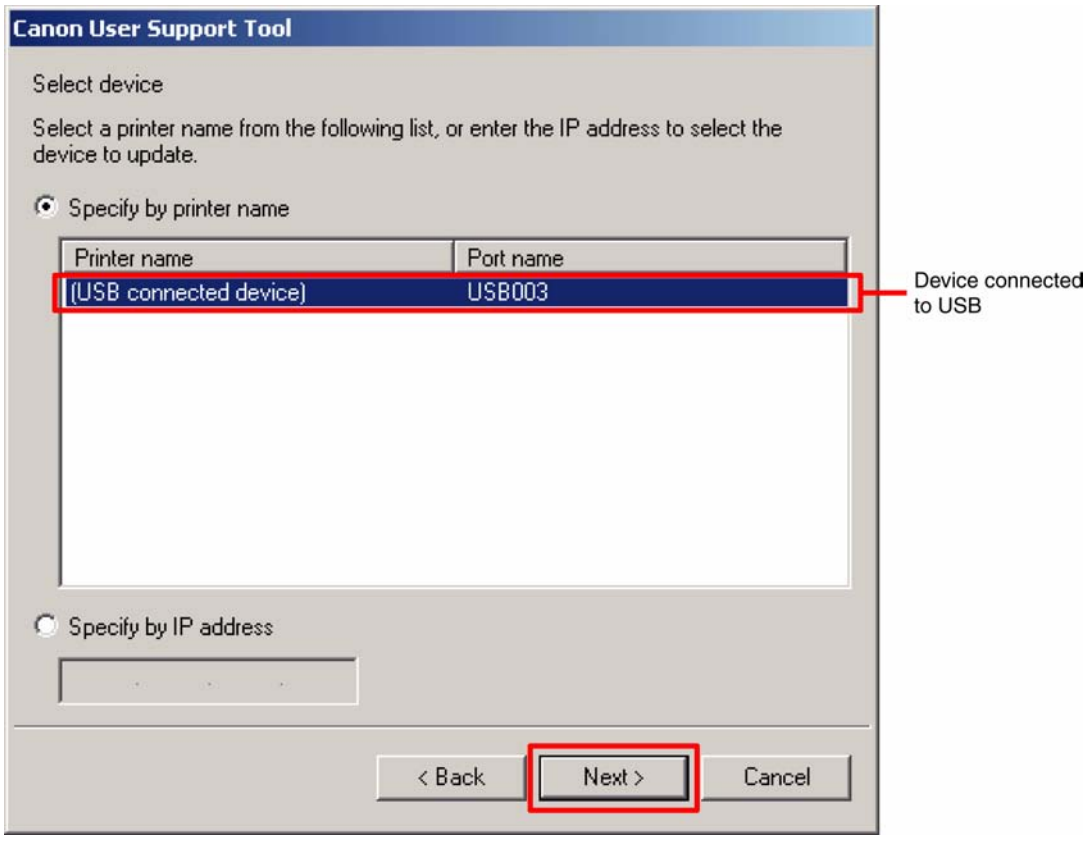
F-19-3

3) Click "Next".



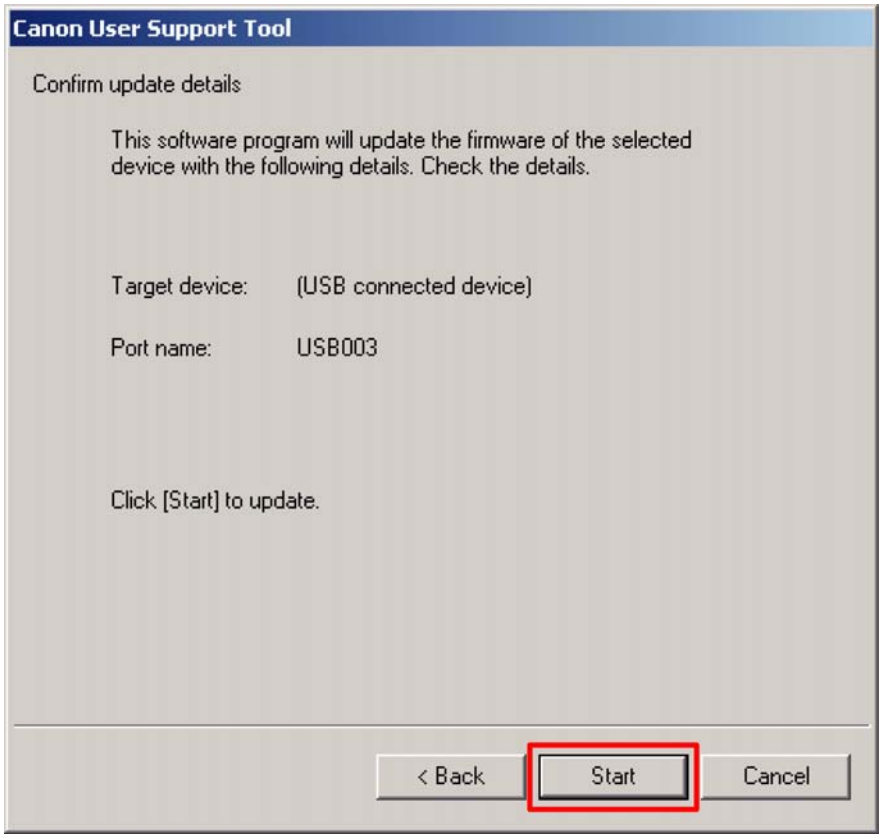
F-19-4

4) Select a USB connected device and click "Next".



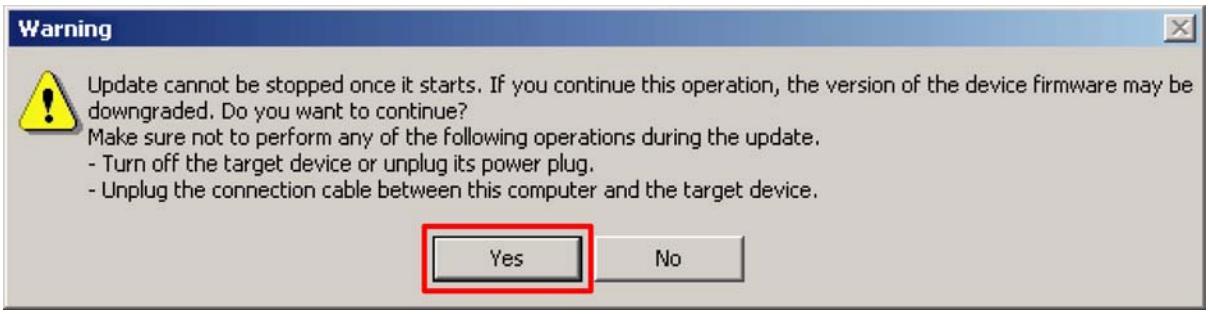
F-19-5

5) Click "Start".



F-19-6

6) Click "Yes".

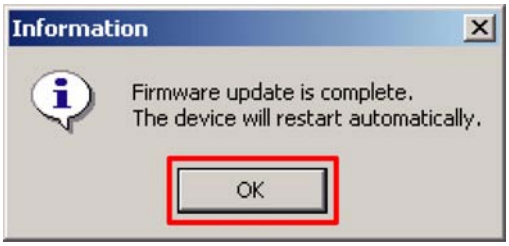


F-19-7

Download will be started.

F-19-8

7) When download is complete, click "OK".



F-19-9

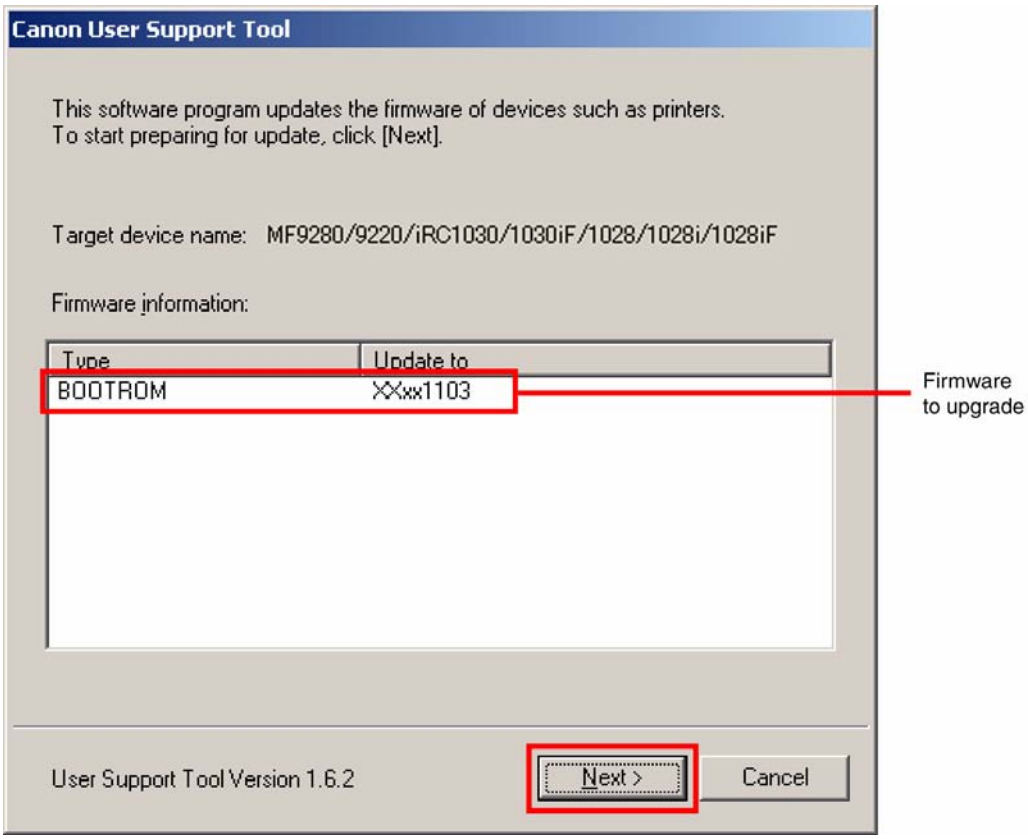
The machine restarts automatically.

8) Check that the firmware version is the same as the one checked in step 2) in service mode.
COPIER> DISPLAY> VERSION

19.3.1.2 Downloading Procedure

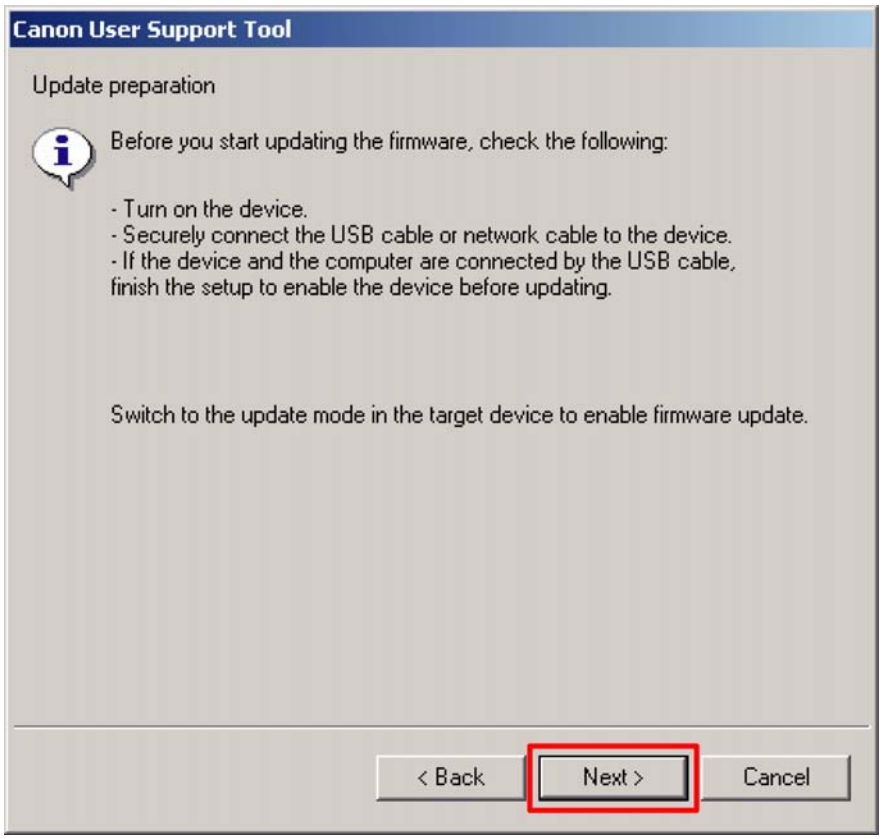
Color imageRUNNER C1030 / Color imageRUNNER C1030iF

1) Open the UST (wlaaXXXX-ust-all.exe).
   XXXX: firmware version
2) Note the firmware version that the current one will be updated to and click "Next".



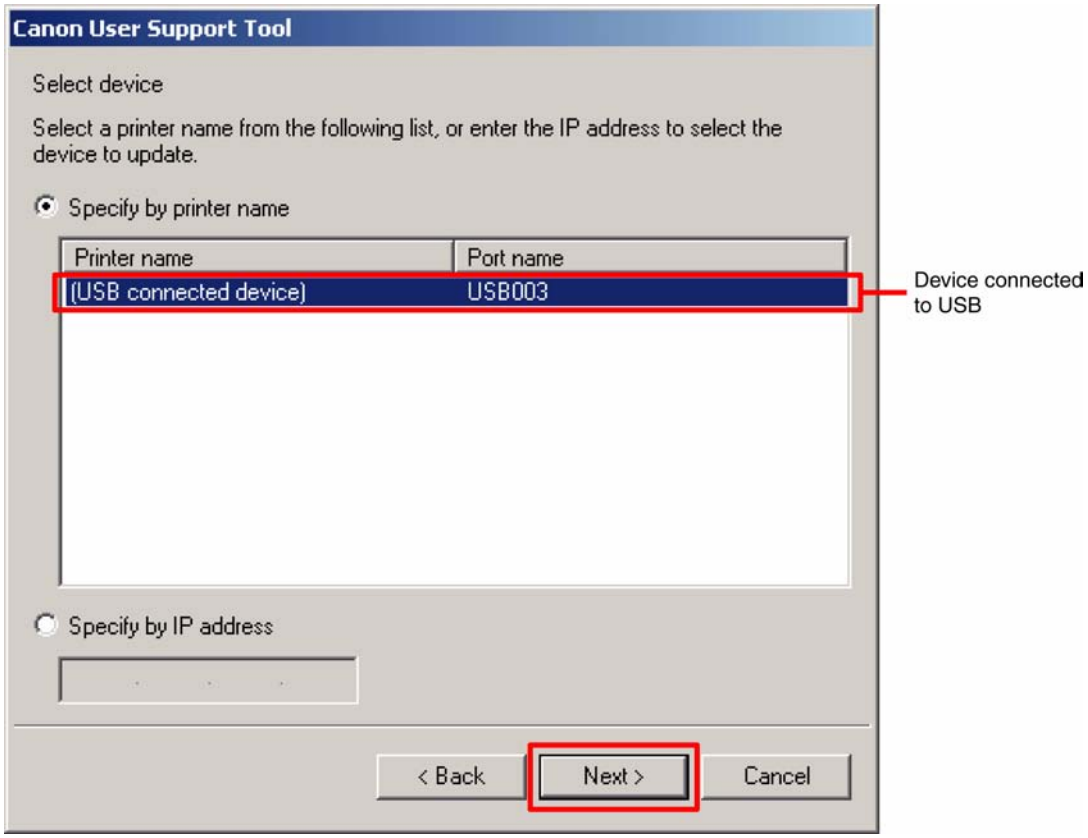
F-19-10

3) Click "Next".



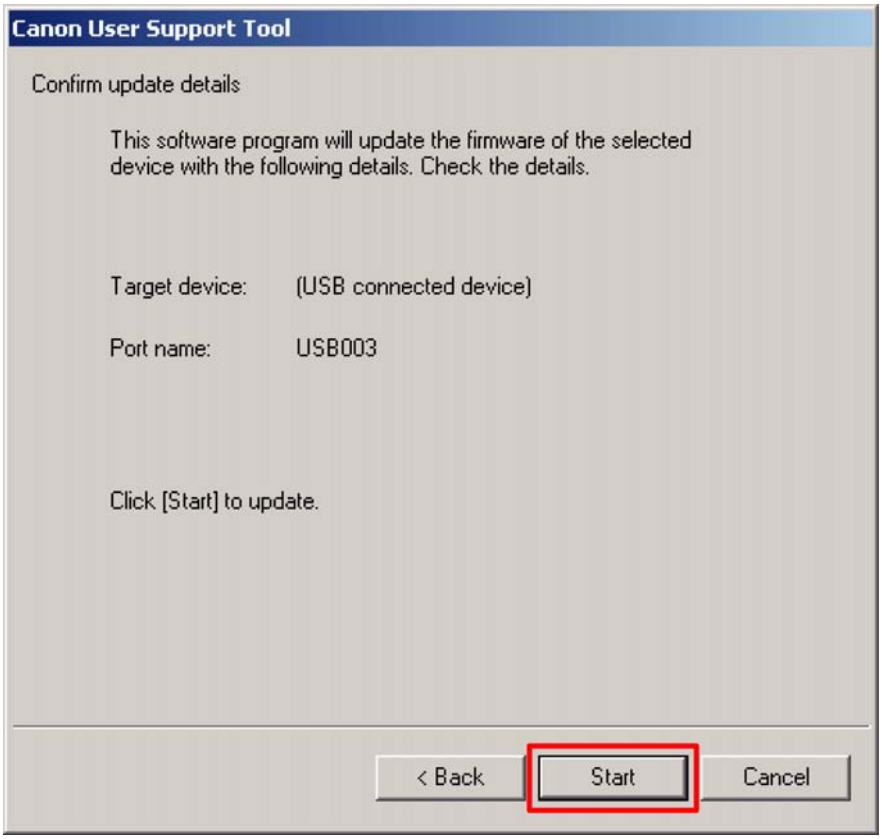
F-19-11

4) Select a USB connected device and click "Next".



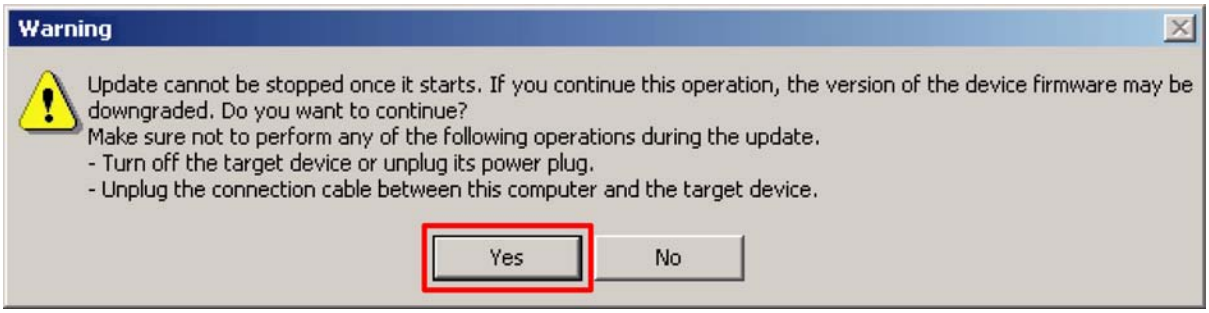
F-19-12

5) Click "Start".



F-19-13

6) Click "Yes".

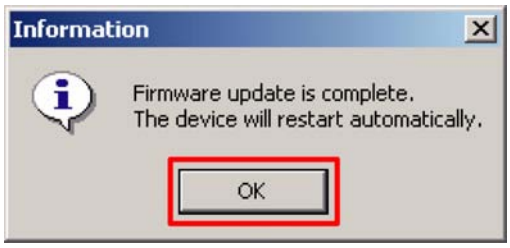


F-19-14

Download will be started.

F-19-15

7) When download is complete, click "OK".



F-19-16

The machine restarts automatically.

8) Check that the firmware version is the same as the one checked in step 2) in service mode.
COPIER> DISPLAY> VERSION

Chapter 20 Service Tools

Contents

20.1 Service Tools....20-1
20.1.1 Special Tools....20-1
20.1.2 Standard Tools....20-1
20.1.3 Special Tools....20-2
20.1.4 Standard Tools....20-2
20.1.5 Solvent/Oil List....20-3
20.1.6 Solvent/Oil List....20-3

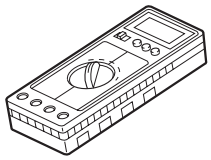
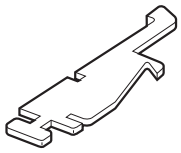
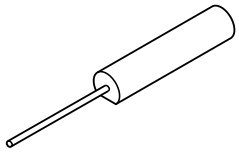
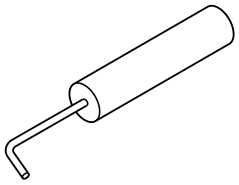
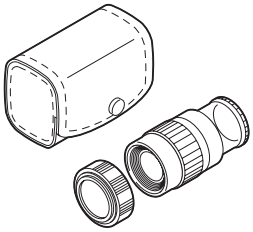
20.1 Service Tools

20.1.1 Special Tools

imageRUNNER C1022 / imageRUNNER C1022i

In addition to the standard tools set, the following special tools are required when servicing the machine:

T-20-1

Tool name	Tool No.	Ctgr	Appearance	Remarks
Digital multimeter	FY9-2002	A		Use for electrical checks; for adjustment of laser power in combination with the laser power checker.
Cover switch	TKN-0093	A		
Tester extension pin	FY9-3038	A		Used as a probe extension when making electrical checks.
Tester extension pin (L-shaped)	FY9-3039	A		Used as a probe extension when making electrical checks.
Loupe	CK-0056	B		Used for checking images.

Ctgr:
A: Must be kept by each service engineer.
B: Must be kept by each group of about five engineers.
C: Must be kept by each workshop.

20.1.2 Standard Tools

imageRUNNER C1022 / imageRUNNER C1022i

The table below lists the standard tools required for servicing the machine.

T-20-2

No.	Tool name	Tool No.	Remark
1	Tool case	TKN-0001	
2	Jumper wire	TKN-0069	With a clip
3	Clearance gauge	CK-0057	0.02 to 0.03 mm
4	Compression spring scale	CK-0058	0 to 600 g for checking the cassette spring pressure
5	Phillips screwdriver	CK-0101	M4, M5 Length : 363 mm
6	Phillips screwdriver	CK-0104	M3, M4 Length: 155 mm
7	Phillips screwdriver	CK-0105	M4, M5 Length: 191 mm
8	Phillips screwdriver	CK-0106	M4, M5 Length: 85 mm
9	Flat-blade screwdriver	CK-0111	
10	Precision flat-blade screwdriver set	CK-0114	6-piece set
11	Allen wrench set	CK-0151	5-piece set
12	File, fine	CK-0161	
13	Allen (hex) screwdriver	CK-0170	M4 Length: 107 mm
14	Diagonal cutting pliers	CK-0201	
15	Needle-nose pliers	CK-0202	

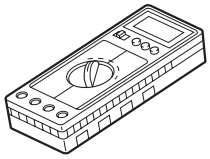
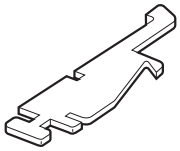
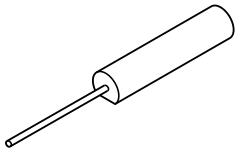
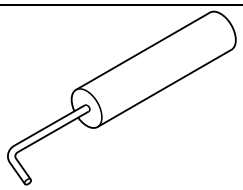
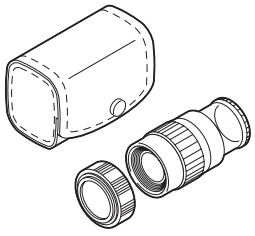
No.	Tool name	Tool No.	Remark
16	Pliers	CK-0203	
17	Retaining ring pliers	CK-0205	Applied to the axis ring
18	Crimper	CK-0218	
19	Tweezers	CK-0302	
20	Ruler	CK-0303	Employed to measure 150 mm
21	Mallet, plastic head	CK-0314	
22	Brush	CK-0315	
23	Penlight	CK-0327	
24	Plastic bottle	CK-0328	100 cc
25	Lint-free paper	CK-0336	500 SH/PKG
26	Oiler	CK-0349	30 cc
27	Plastic jar	CK-0351	30 cc
28	Digital multi-measure	FY9-2032	

20.1.3 Special Tools

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

In addition to the standard tools set, the following special tools are required when servicing the machine:

T-20-3

Tool name	Tool No.	Ctgr	Appearance	Remarks
Digital multimeter	FY9-2002	A		Use for electrical checks; for adjustment of laser power in combination with the laser power checker.
Cover switch	TKN-0093	A		
Tester extension pin	FY9-3038	A		Used as a probe extension when making electrical checks.
Tester extension pin (L-shaped)	FY9-3039	A		Used as a probe extension when making electrical checks.
Loupe	CK-0056	B		Used for checking images.

Ctgr:
A: Must be kept by each service engineer.
B: Must be kept by each group of about five engineers.
C: Must be kept by each workshop.

20.1.4 Standard Tools

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

The table below lists the standard tools required for servicing the machine.

T-20-4

No.	Tool name	Tool No.	Remark
1	Tool case	TKN-0001	
2	Jumper wire	TKN-0069	With a clip
3	Clearance gauge	CK-0057	0.02 to 0.03 mm
4	Compression spring scale	CK-0058	0 to 600 g for checking the cassette spring pressure
5	Phillips screwdriver	CK-0101	M4, M5 Length : 363 mm

No.	Tool name	Tool No.	Remark
6	Phillips screwdriver	CK-0104	M3, M4 Length: 155 mm
7	Phillips screwdriver	CK-0105	M4, M5 Length: 191 mm
8	Phillips screwdriver	CK-0106	M4, M5 Length: 85 mm
9	Flat-blade screwdriver	CK-0111	
10	Precision flat-blade screwdriver set	CK-0114	6-piece set
11	Allen wrench set	CK-0151	5-piece set
12	File, fine	CK-0161	
13	Allen (hex) screwdriver	CK-0170	M4 Length: 107 mm
14	Diagonal cutting pliers	CK-0201	
15	Needle-nose pliers	CK-0202	
16	Pliers	CK-0203	
17	Retaining ring pliers	CK-0205	Applied to the axis ring
18	Crimper	CK-0218	
19	Tweezers	CK-0302	
20	Ruler	CK-0303	Employed to measure 150 mm
21	Mallet, plastic head	CK-0314	
22	Brush	CK-0315	
23	Penlight	CK-0327	
24	Plastic bottle	CK-0328	100 cc
25	Lint-free paper	CK-0336	500 SH/PKG
26	Oiler	CK-0349	30 cc
27	Plastic jar	CK-0351	30 cc
28	Digital multi-measure	FY9-2032	

20.1.5 Solvent/Oil List

imageRUNNER C1022 / imageRUNNER C1022i

T-20-5

No.	Name	Uses	Remarks
1	Ethyl alcohol	Cleaning - Plastic - Rubber - External parts - Oil and toner stains	- Procure locally - Flammable: keep away from flame
2	Grease	Apply to gears, shafts, bushings, and other sliding parts.	MOLYKOTE(R) EM-50LS GREASE Dow Corning Asia Ltd. (Tool no. HY9-0007)
3			MOLYKOTE(R) PD-910 LUBRICANT Dow Corning Asia Ltd.
4			DRYSURF 1340B HARVES Co., Ltd.
5		Apply to fixing unit	MOLYKOTE(R) HP-300 GREASE Dow Corning Asia Ltd. (Tool no. CK-8012)

⚠
Do not use alcohol to wipe external covers. Use a moist cloth (well wrung) to clean them.

20.1.6 Solvent/Oil List

Color imageRUNNER C1030 / Color imageRUNNER C1030iF

T-20-6

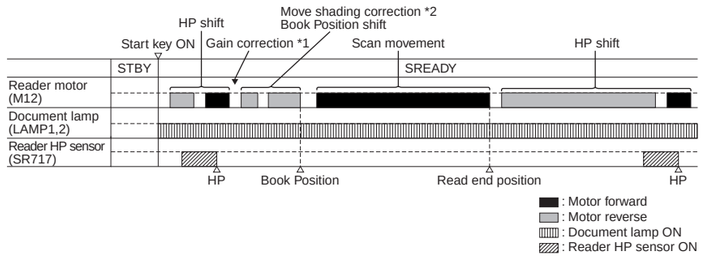
No.	Name	Purpose of use	Remarks
1	Alcohol	Cleaning e.g.) Plastic Rubbers Metal portion Oil soiling Toner soiling	- Never put it close to fire - Local procurement
2	Lubricant	Apply between gear and shaft	- Tellus Oil 68 (Showa Shell Sekiyu-made)
3	Lubricant	Apply to gear	- MOLYKOTE EM-50L (Dow Corning-made) - Tool No.: HY9-0007

Appendix

1 General Timing Chart

Sequence of Operations (reader unit)

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-1-1

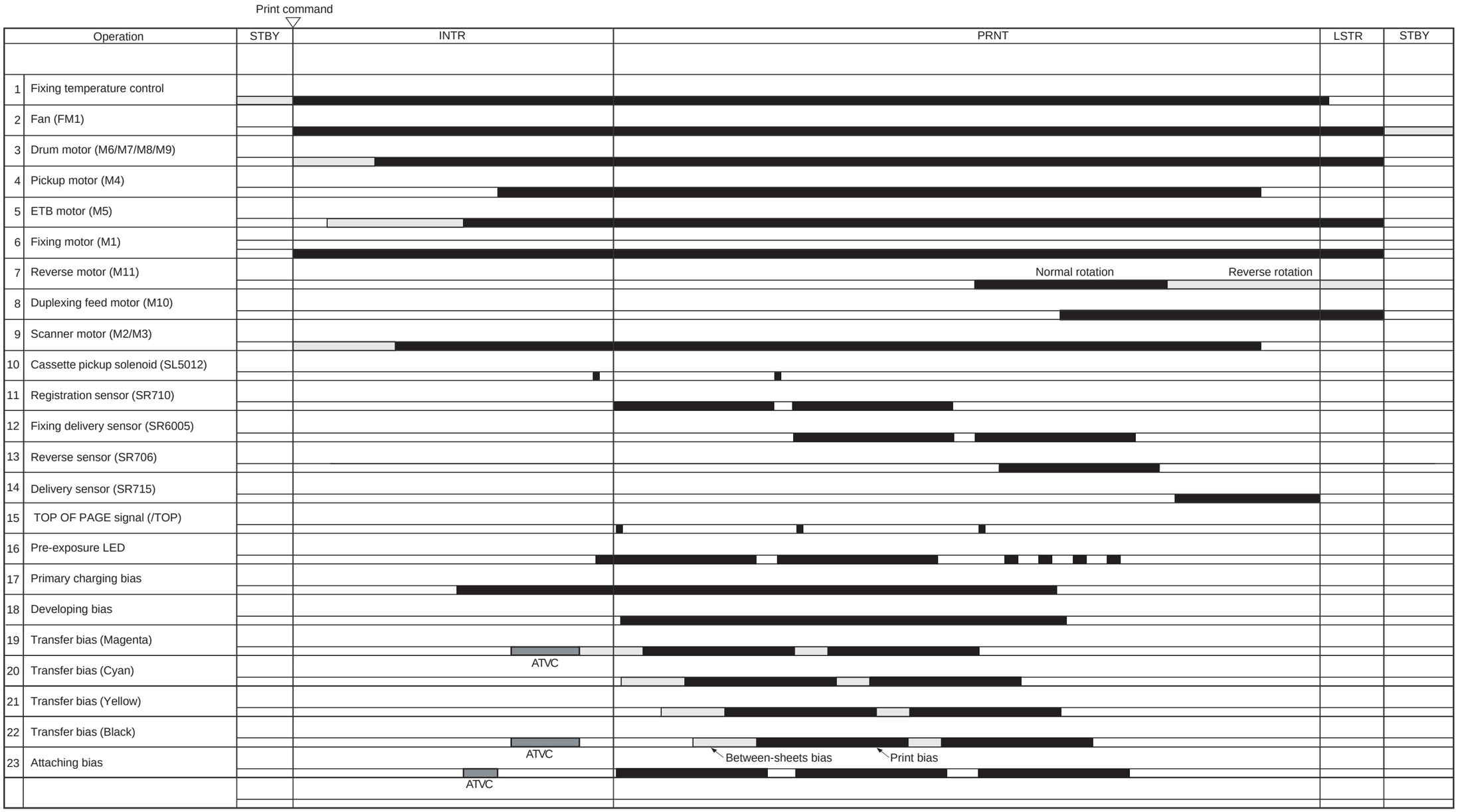
*1 Gain correction: The gain ratio of the analog video signal output from CCD is adjusted to be a fixed value.

*2 Move shading correction: Even when the document density is constant, the CCD output level does not become constant due to the following reasons.

Sequence of Operations (printer unit)

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

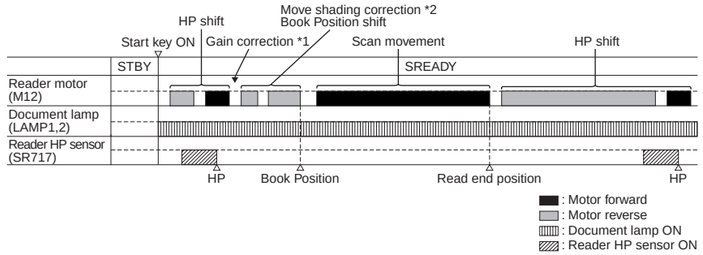
<Condition> Full color, Cassette, A4 Single-sided (2 prints, continuous)



F-1-2

Sequence of Operations (reader unit)

imageRUNNER C1022 / imageRUNNER C1022i



F-1-3

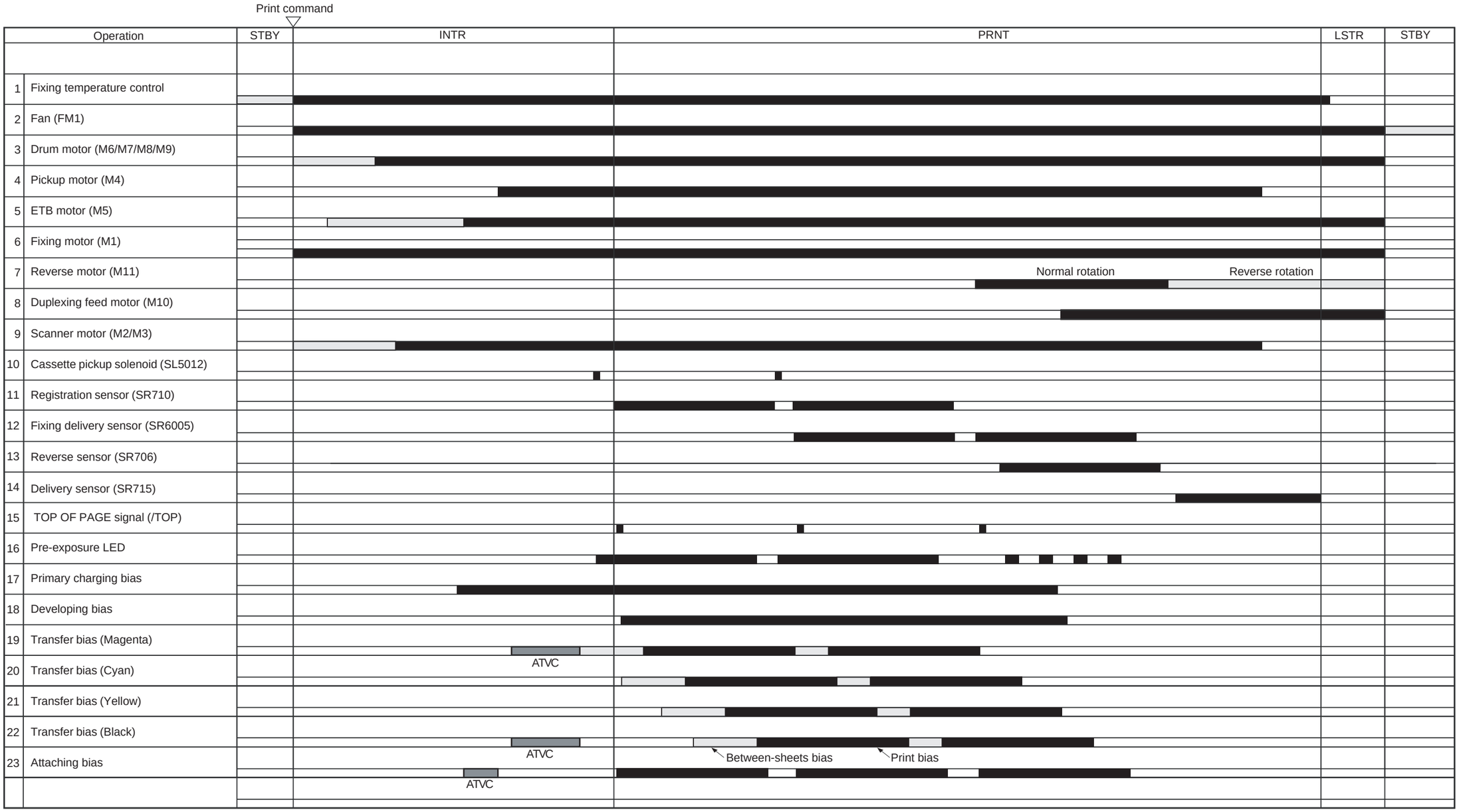
*1 Gain correction: The gain ratio of the analog video signal output from CCD is adjusted to be a fixed value.

*2 Move shading correction: Even when the document density is constant, the CCD output level does not become constant due to the following reasons.

Sequence of Operations (printer unit)

imageRUNNER C1022 / imageRUNNER C1022i

<Condition> Full color, Cassette, A4 Single-sided (2 prints, continuous)


Print command
Operation
STBY
INTR
PRNT
LSTR
STBY
1 Fixing temperature control
2 Fan (FM1)
3 Drum motor (M6/M7/M8/M9)
4 Pickup motor (M4)
5 ETB motor (M5)
6 Fixing motor (M1)
7 Reverse motor (M11)
Normal rotation
Reverse rotation
8 Duplexing feed motor (M10)
9 Scanner motor (M2/M3)
10 Cassette pickup solenoid (SL5012)
11 Registration sensor (SR710)
12 Fixing delivery sensor (SR6005)
13 Reverse sensor (SR706)
14 Delivery sensor (SR715)
15 TOP OF PAGE signal (/TOP)
16 Pre-exposure LED
17 Primary charging bias
18 Developing bias
19 Transfer bias (Magenta)
20 Transfer bias (Cyan)
ATVC
21 Transfer bias (Yellow)
22 Transfer bias (Black)
23 Attaching bias
ATVC
Between-sheets bias
Print bias
ATVC

F-1-4

T-2-1

Abbreviation	Signal name
VDO_K0_P	VIDEO signal (Black video 1)
FPO	SERIAL DATA signal
VDO_K0_N	VIDEO signal (Black video 1)
FPI	SERIAL DATA signal
VDO_K1_P	VIDEO signal (Black video 2)
FPCK	SERIAL CLOCK signal
VDO_K1_N	VIDEO signal (Black video 2)
/FPCS	SERIAL STATUS signal
VDO_Y0_P	VIDEO signal (Yellow video 1)
/TOP	VERTICAL SYNCHRONOUS signal
VDO_Y0_N	VIDEO signal (Yellow video 1)
/BD_M	BD signal (Magenta)
VDO_Y1_P	VIDEO signal (Yellow video 2)
/BD_C	BD signal (Cyan)
VDO_Y1_N	VIDEO signal (Yellow video 2)
/BD_Y	BD signal (Yellow)
VDO_C0_P	VIDEO signal (Cyan video 1)
/BD_K	BD signal (Black)
VDO_C0_N	VIDEO signal (Cyan video 1)
/CCRT	STATUS CHANGE NOTICE signal
VDO_C1_P	VIDEO signal (Cyan video 2)
SDA	SERIAL DATA signal
VDO_C1_N	VIDEO signal (Cyan video 2)
SCL	SERIAL CLOCK signal
VDO_M0_P	VIDEO signal (Magenta video 1)
SCL	STATUS COMMAND signal
VDO_M0_N	VIDEO signal (Magenta video 1)
SCLK	SERIAL CLOCK signal
VDO_M1_P	VIDEO signal (Magenta video 2)
VDO_M1_P	VIDEO signal (Magenta video 2)

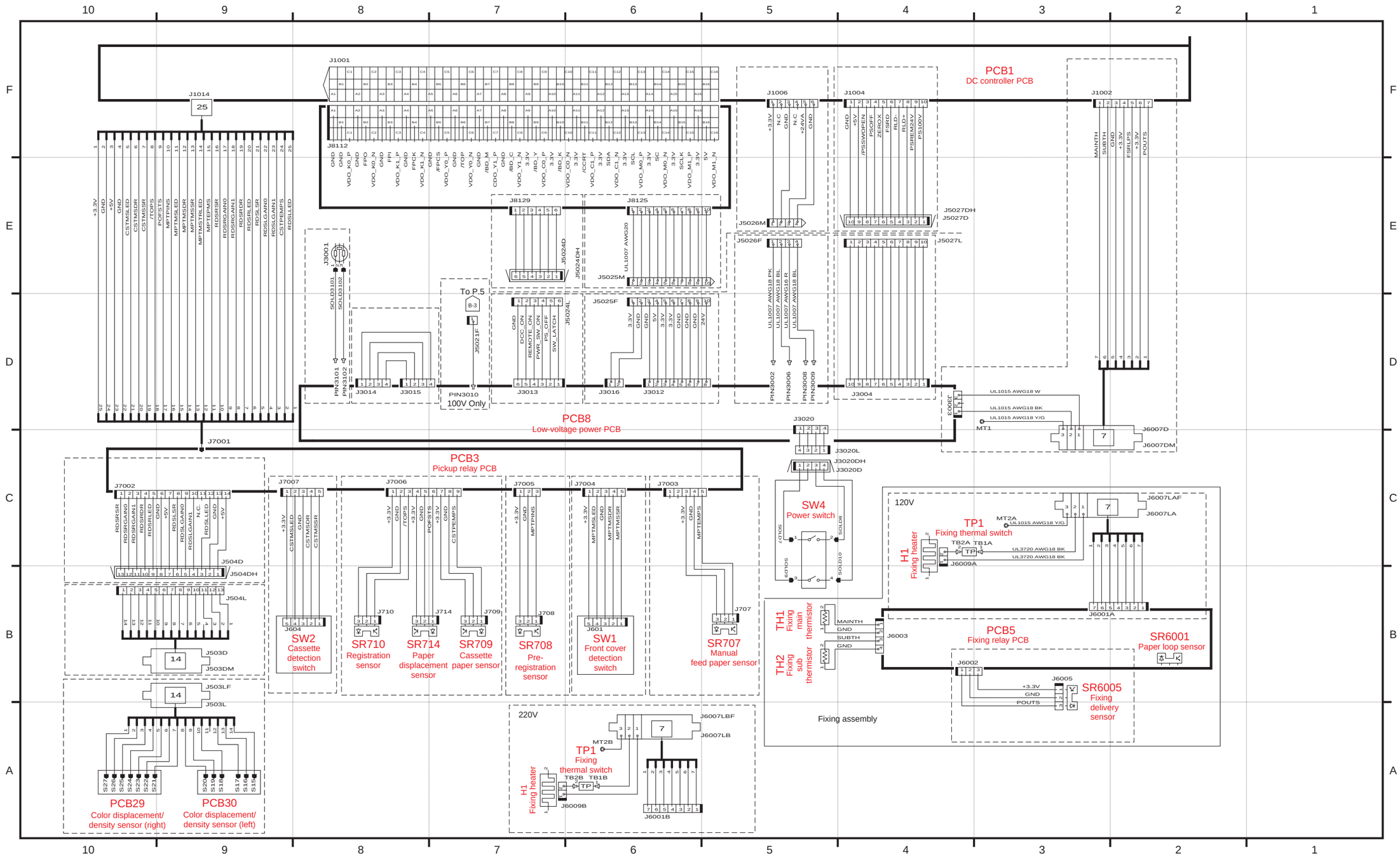
Abbreviation	Signal name
MAINTH	MAIN THERMISTOR TEMPERATURE signal
SUBTH	SUB THERMISTOR TEMPERATURE signal
FSRLPS	PAPER LOOP signal
POUTS	FIXING PAPER signal
/PSSWOPEN	POWER SWITCH MONITOR signal
PSOFF	POWER OFF CONTROL signal
ZEROX	ZERO CROSSING signal
FSRD	FIXING HEATER DRIVE signal
RLD-	RELAY DRIVE signal -
RLD+	RELAY DRIVE signal +
PSREM24V	POWER SAVE MODE signal
PS100V	PRINTER POWER SUPPLY VOLTAGE signal
FAN10N	FAN DRIVE signal
FAN1LK	FAN LOCK signal
PRI4PWM	CHARGE BIAS DRIVE signal (Black)
PRI3PWM	CHARGE BIAS DRIVE signal (Yellow)
PRI2PWM	CHARGE BIAS DRIVE signal (Cyan)
PRI1PWM	CHARGE BIAS DRIVE signal (Magenta)
DEV4PWM	DEVELOPING BIAS DRIVE signal (Black)
DEV3PWM	DEVELOPING BIAS DRIVE signal (Yellow)
DEV2PWM	DEVELOPING BIAS DRIVE signal (Cyan)
DEV1PWM	DEVELOPING BIAS DRIVE signal (Magenta)
PREEXP4	PRIMARY EXPOSURE LED DRIVE signal (Black)
PREEXP3	PRIMARY EXPOSURE LED DRIVE signal (Yellow)
PREEXP2	PRIMARY EXPOSURE LED DRIVE signal (Cyan)
PREEXP1	PRIMARY EXPOSURE LED DRIVE signal (Magenta)
/BD3I	BD INPUT signal (Yellow)
LD3PDOUT	LASER CURRENT OUTPUT signal
/VDO32	VIDEO signal (Yellow video 2)
VDO32	VIDEO signal (Yellow video 2)
LD3CTRL2	LASER CONTROL signal
LD3CTRL1	LASER CONTROL signal
LD3CTRL0	LASER CONTROL signal
/VDO31	VIDEO signal (Yellow video 1)
VDO31	VIDEO signal (Yellow video 1)

Abbreviation	Signal name
/VDO42	VIDEO signal (Black video 2)
VDO42	VIDEO signal (Black video 2)
LD4CTRL2	LASER CONTROL signal
LD4CTRL1	LASER CONTROL signal
LD4CTRL0	LASER CONTROL signal
/VDO41	VIDEO signal (Black video 1)
VDO41	VIDEO signal (Black video 1)
LDPWRH	LASER LIGHT INTENSITY SWITCH signal
LD4PDOUT	LASER CURRENT OUTPUT signal
/BD1I	BD INPUT signal (Magenta)
LD1PDOUT	LASER CURRENT OUTPUT signal
/VDO12	VIDEO signal (Magenta video 2)
VDO12	VIDEO signal (Magenta video 2)
LD1CTRL2	LASER CONTROL signal
LD1CTRL1	LASER CONTROL signal
LD1CTRL0	LASER CONTROL signal
/VDO11	VIDEO signal (Magenta video 1)
VDO11	VIDEO signal (Magenta video 1)
/VDO22	VIDEO signal (Cyan video 2)
VDO22	VIDEO signal (Cyan video 2)
LD2CTRL2	LASER CONTROL signal
LD2CTRL1	LASER CONTROL signal
LD2CTRL0	LASER CONTROL signal
/VDO21	VIDEO signal (Cyan video 1)
VDO21	VIDEO signal (Cyan video 1)
LDPWRH	LASER LIGHT INTENSITY SWITCH signal
LD2PDOUT	LASER CURRENT OUTPUT signal
/TOPS	TOP OF PAGE signal
POFSTS	ONE-SIDED PAPER signal
MPTPINS	MULTI-PURPOSE TRAY PAPER POSITION signal
MPTEPMS	MULTI-PURPOSE TRAY PAPER signal
RDSRSR	COLOR MISREGISTRATION/IMAGE DENSITY signal (Regular reflection)
RDSRGAIN0	PHOTORECEPTION SENSITIVITY SWITCH signal
RDSRGAIN1	PHOTORECEPTION SENSITIVITY SWITCH signal

Abbreviation	Signal name
RDSRDR	COLOR MISREGISTRATION/IMAGE DENSITY signal (Irregular reflection)
RDSRLED	COLOR MISREGISTRATION/IMAGE DENSITY DETECTION LED DRIVE signal
RDSLSR	COLOR MISREGISTRATION/IMAGE DENSITY signal (Regular reflection)
RDSLGAIN0	PHOTORECEPTION SENSITIVITY SWITCH signal
RDSLGAIN1	PHOTORECEPTION SENSITIVITY SWITCH signal
CSTPEMPS	CASSETTE PAPER signal
RDSLLED	COLOR MISREGISTRATION/IMAGE DENSITY DETECTION LED DRIVE signal
ESFUMP	ENVIRONMENT SENSOR HUMIDITY signal
ESTMP	ENVIRONMENT SENSOR TEMPERATURE signal
TR4PWM	TRANSFER POSITIVE BIAS DRIVE signal (Black)
TR3NPWM	TRANSFER NEGATIVE BIAS DRIVE signal (Yellow)
TR3PWM	TRANSFER POSITIVE BIAS DRIVE signal (Yellow)
TR2PWM	TRANSFER POSITIVE BIAS DRIVE signal (Cyan)
TR1NPWM	TRANSFER NEGATIVE BIAS DRIVE signal (Magenta)
TR1PWM	TRANSFER POSITIVE BIAS DRIVE signal (Magenta)
ATTPWM	ATTRACTION POSITIVE BIAS DRIVE signal
/ATTNDCD	ATTRACTION NEGATIVE BIAS DRIVE signal
TR4I	TRANSFER CURRENT signal (Black)
TR1I	TRANSFER CURRENT signal (Magenta)
ATTI	ATTRACTION CURRENT signal
TON4SNS	TONER LEVEL signal
TONLED	TONER LEVEL DETECTION LED DRIVE signal
TON3SNS	TONER LEVEL signal
DEVBKSEPS	DEVELOPING ENGAGEMENT signal (Black)
TON2SNS	TONER LEVEL signal
DEVCSEPS	DEVELOPING ENGAGEMENT signal (Yellow/Magenta/Cyan)
TON1SNS	TONER LEVEL signal
CRGNEW	TONER CARTRIDGE SETTING FAILURE signal
TGRD	Memory tag communication line (Input)
TGCB	Memory tag communication line (Output)
TGCS4	MEMORY TAG CLOCK signal

Abbreviation	Signal name
TGCS3	MEMORY TAG CLOCK signal
TGCS2	MEMORY TAG CLOCK signal
TGCS1	MEMORY TAG CLOCK signal
TGCA	MEMORY RESET signal
/SCNM1ACC	SCANNER MOTOR ACCELERATION signal
/SCNM1DEC	SCANNER MOTOR DECELERATION signal
/SCNM2ACC	SCANNER MOTOR ACCELERATION signal
/SCNM2DEC	SCANNER MOTOR DECELERATION signal
/DM2DEC	DRUM MOTOR DECELERATION signal (Cyan)
DM123REV	DRUM MOTOR REVERSE COMMAND signal (Yellow/Magenta/Cyan)
/DM2FG	DRUM MOTOR SPEED signal (Cyan)
/DM1DEC	DRUM MOTOR DECELERATION signal (Magenta)
/DM2ACC	DRUM MOTOR ACCELERATION signal (Cyan)
CSTEMPS	CASSETTE PRESENCE signal
/DM1FG	DRUM MOTOR SPEED signal (Magenta)
D4HPS	DRUM HOME POSITION signal
/DM1ACC	DRUM MOTOR ACCELERATION signal (Magenta)
D3HPS	DRUM HOME POSITION signal
/DM3DEC	DRUM MOTOR DECELERATION signal (Yellow)
D2HPS	DRUM HOME POSITION signal
DM4REV	DRUM MOTOR REVERSE COMMAND signal (Black)
D1HPS	DRUM HOME POSITION signal
/DM1DEC	DRUM MOTOR DECELERATION signal (Black)
FEDMI2	FEED MOTOR CONTROL signal
/DM4FG	DRUM MOTOR SPEED signal (Black)
FEDMB	FEED MOTOR CONTROL signal
/DM4ACC	DRUM MOTOR ACCELERATION signal (Black)
FEDMI3	FEED MOTOR CONTROL signal
/DM3FG	DRUM MOTOR SPEED signal (Yellow)
FEDMI1	FEED MOTOR CONTROL signal
/DM3ACC	DRUM MOTOR ACCELERATION signal (Yellow)
FEDMI0	FEED MOTOR CONTROL signal
FEDMA	FEED MOTOR CONTROL signal
INPOPMSLED	OP PAPER FEEDER MEDIA SENSOR DRIVE signal

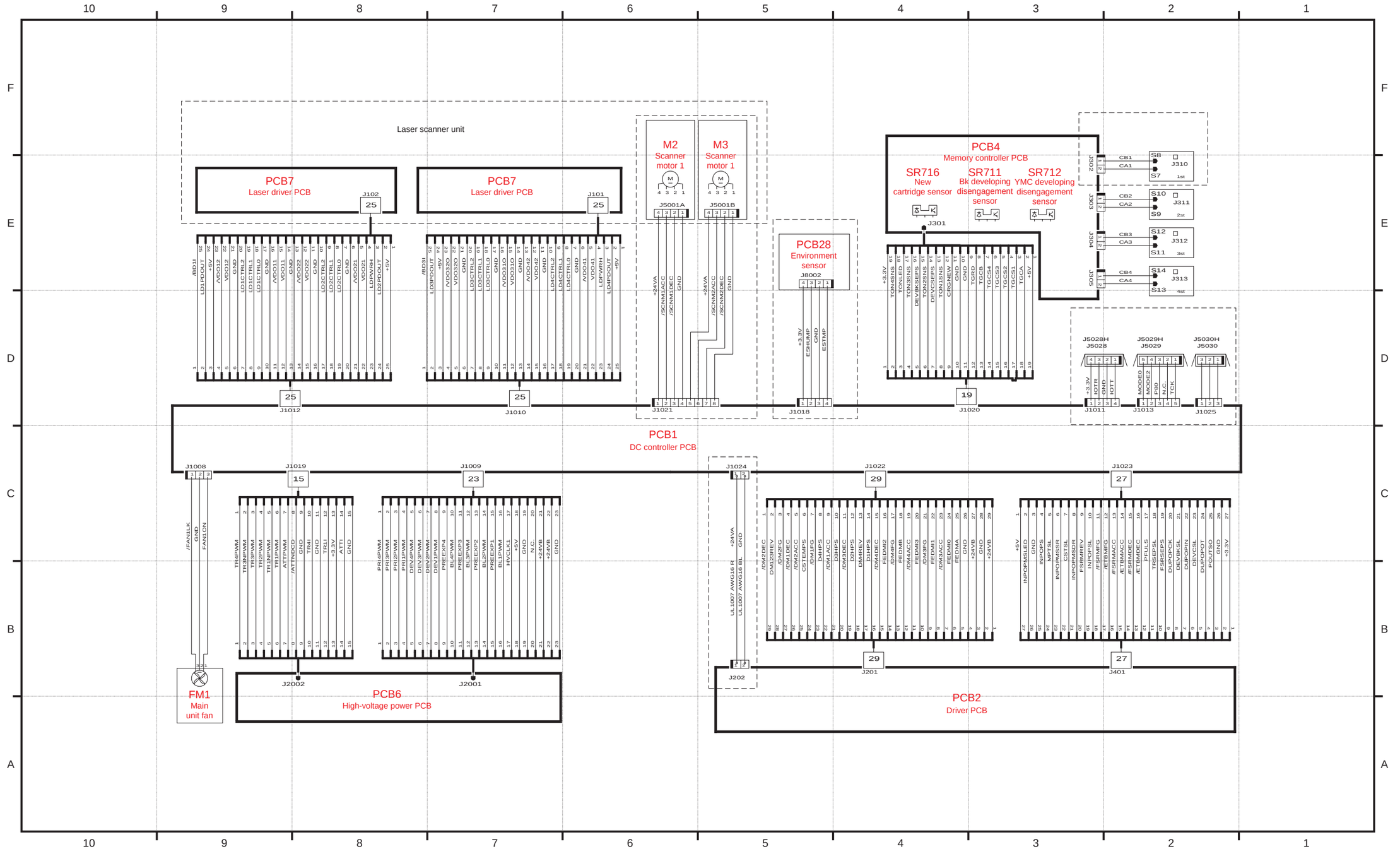
Abbreviation	Signal name
INPOPS	OP PAPER FEEDER PAPER signal
MPTSL	MULTI-PURPOSE TRAY PICK-UP SOLENOID DRIVE signal
INPOPMSSR	OP PAPER FEEDER MEDIA SENSOR REGULAR REFLECTION signal
CSTSL	CASSETTE PICK-UP SOLENOID DRIVE signal
INPOPMSDR	OP PAPER FEEDER MEDIA SENSOR IRREGULAR REFLECTION signal
FSRMREV	FIXING MOTOR REVERSE COMMAND signal
INPOPSL	OP PAPER FEEDER PICK-UP SOLENOID DRIVE signal
/FSRMFG	FIXING MOTOR SPEED signal
/ETBMFG	ETB MOTOR SPEED signal
/FSRMACC	FIXING MOTOR ACCELERATION signal
/ETBMACC	ETB MOTOR ACCELERATION signal
/FSRMDEC	FIXING MOTOR DECELERATION signal
/ETBMDEC	ETB MOTOR DECELERATION signal
PFULS	DELIVERY TRAY PAPER FULL signal
TRSEPSL	ETB ESTRANGEMENT SOLENOID DRIVE signal
FSRSEPS	FIXING PRESSURE RELEASE signal
DUPOPCK	CLOCK signal
DEVBKLS	DEVELOPING ESTRANGEMENT SOLENOID DRIVE signal (Black)
DUPOPIN	SERIAL DATA signal
DEVCSL	DEVELOPING ESTRANGEMENT SOLENOID DRIVE signal (Yellow/Magenta/Cyan)
DUPOPOT	SERIAL DATA signal
POUTSO	DUPLEXING REVERSE MOTOR DRIVE TRIGGER signal



F-2-1

General Circuit Diagram (2/5)

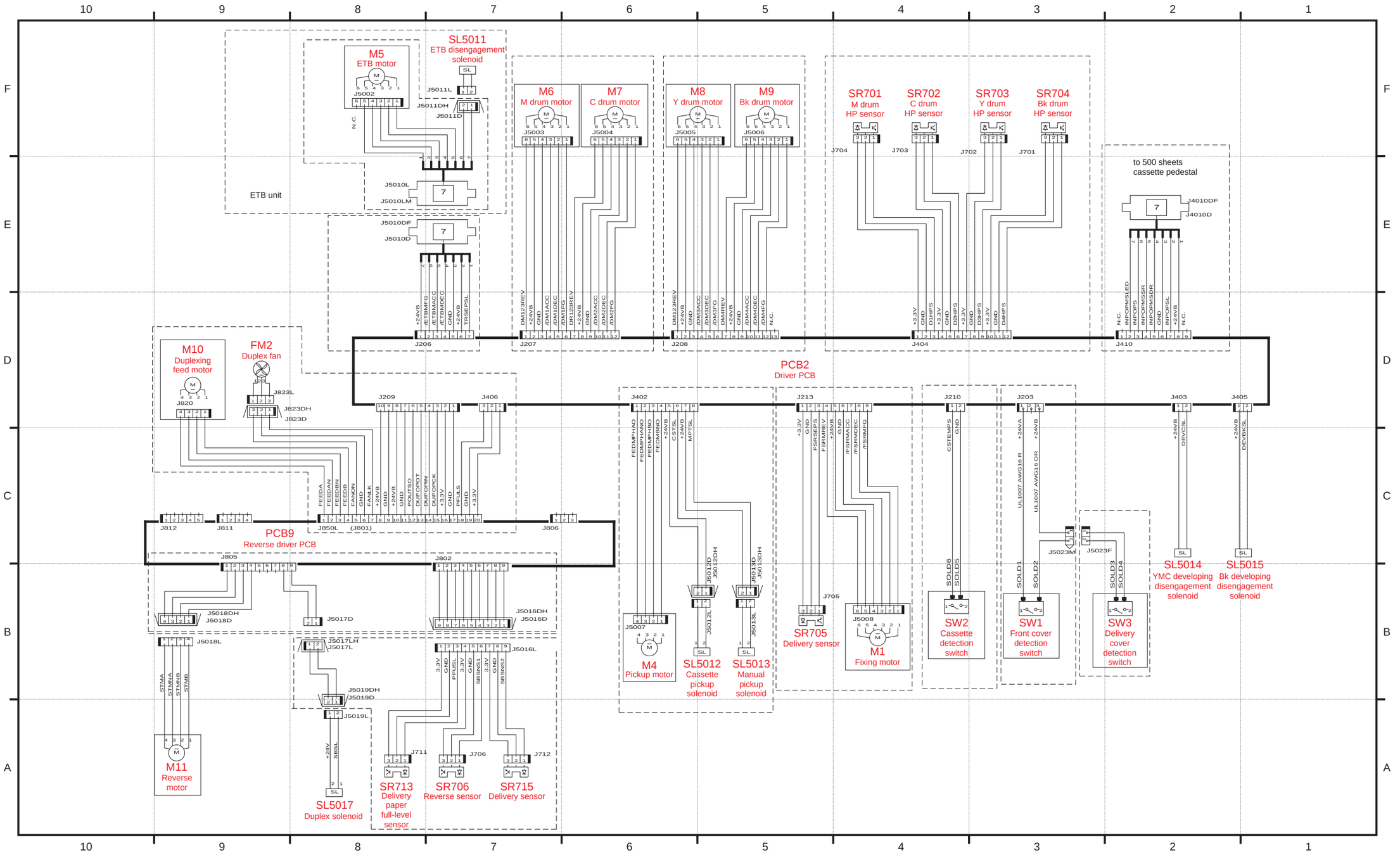
imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF



F-2-2

General Circuit Diagram (3/5)

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

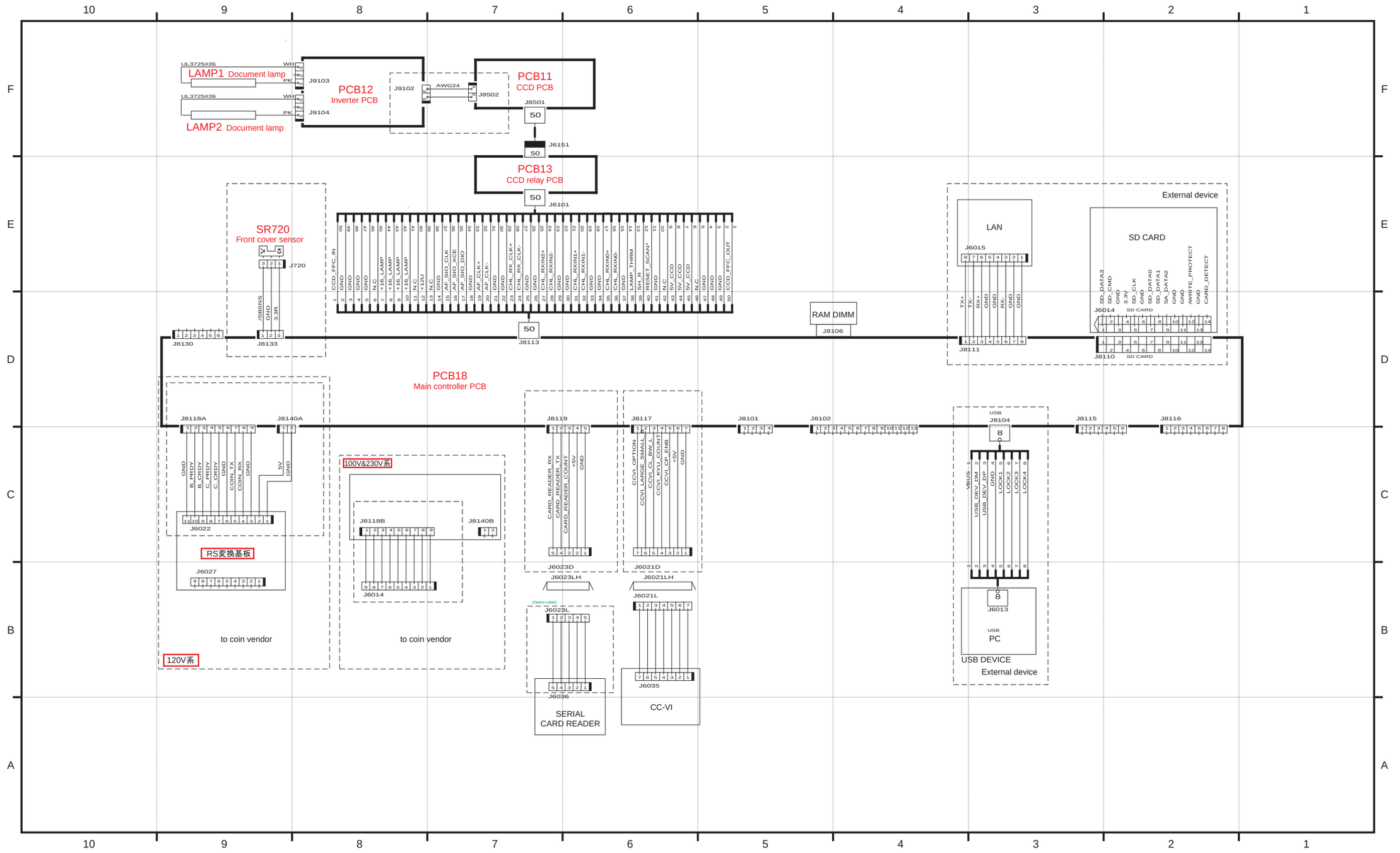


P.3

F-2-3

General Circuit Diagram (4/5)

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF

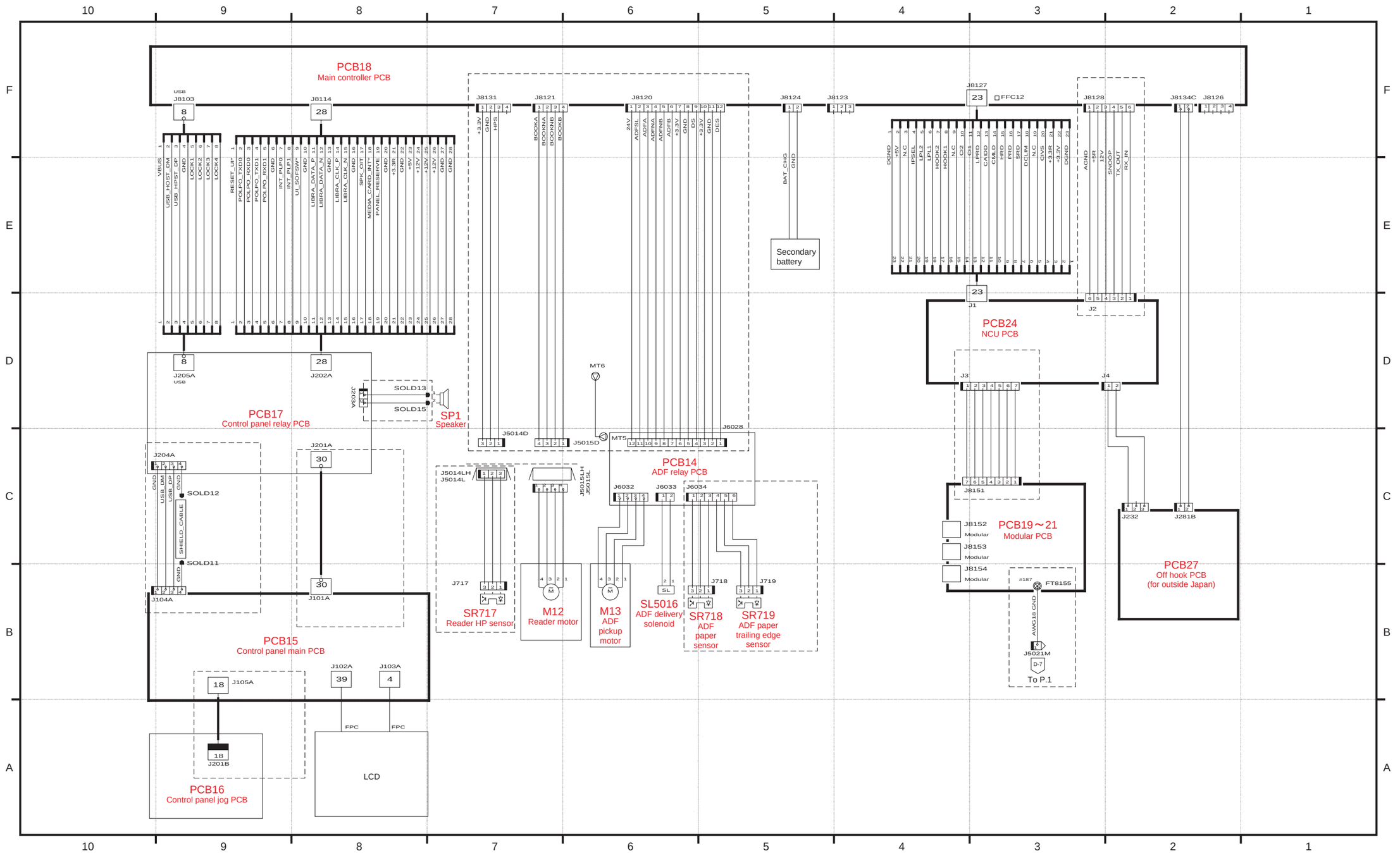


F-2-4

P.4

General Circuit Diagram (5/5)

imageRUNNER C1022 / imageRUNNER C1022i / Color imageRUNNER C1030 / Color imageRUNNER C1030iF


PCB18
Main controller PCB
USB
J8103
J8114
J8131
J8121
J8120
J8124
J8123
J8127
FFC12
J8128
J8134C
J8126
Secondary battery
J205A
J202A
J1
J2
PCB24
NCU PCB
J3
J4
SOLD13
SOLD15
SP1
Speaker
MT6
PCB17
Control panel relay PCB
J5014D
J5015D
MT5
J6028
J204A
J201A
SOLD12
SOLD11
J104A
J101A
J5014LH
J5014L
J5015LH
J5015L
PCB14
ADF relay PCB
J6032
J6033
J6034
J8151
J8152
Modular
J8153
Modular
J8154
Modular
PCB19～21
Modular PCB
J232
J281B
PCB27
Off hook PCB
(for outside Japan)
#187
FT8155
AWG18 GND
J5021M
To P.1
J717
SR717
Reader HP sensor
M12
Reader motor
M13
ADF pickup motor
SL5016
ADF delivery solenoid
J718
SR718
ADF paper sensor
J719
SR719
ADF paper trailing edge sensor
PCB15
Control panel main PCB
J105A
J102A
J103A
J201B
FPC
LCD
PCB16
Control panel jog PCB

F-2-5

Oct 29 2010

Canon